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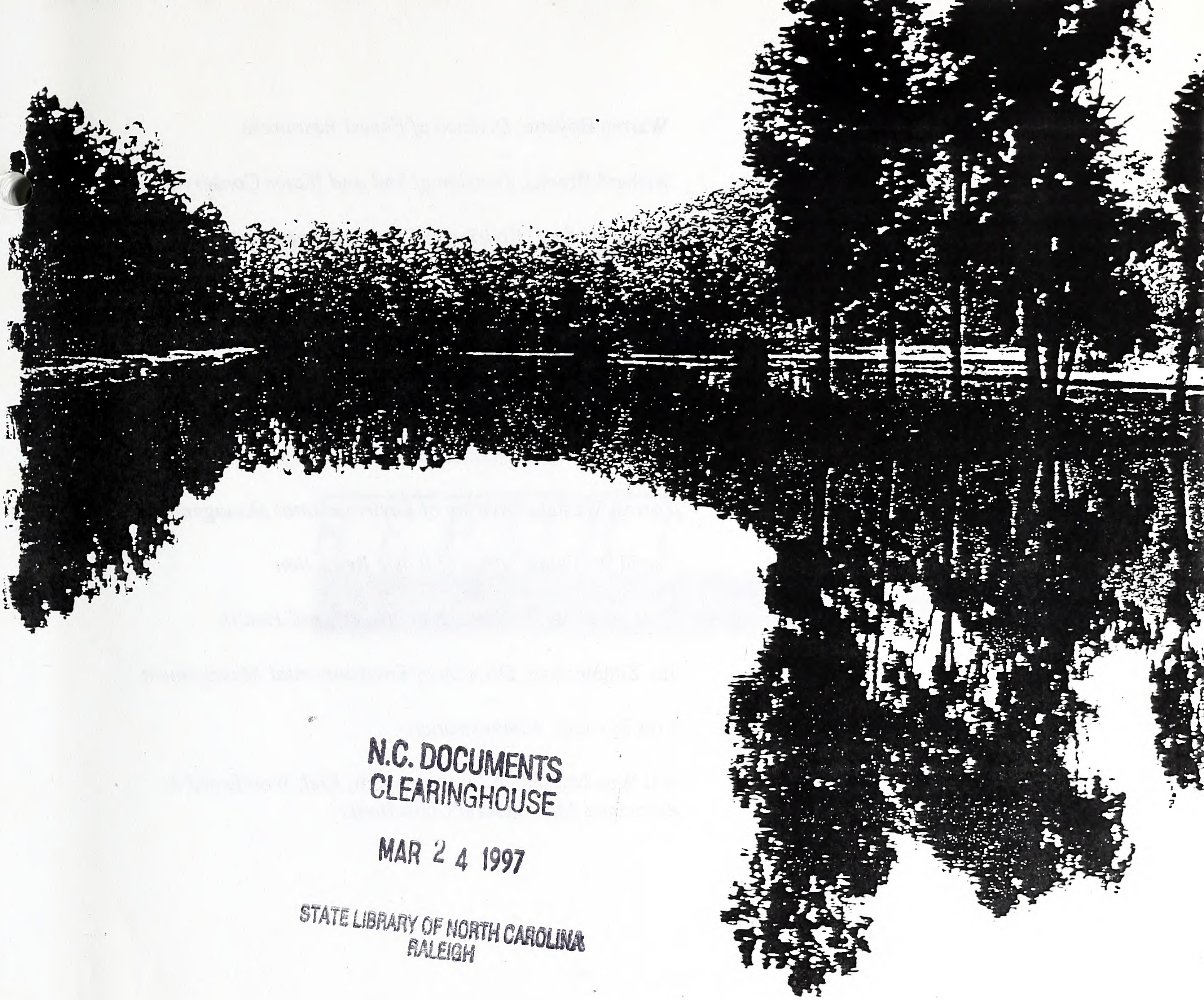
Environmental Programs Action Team

EPAT

REPORT

July 1995

North Carolina Department of Environment, Health and Natural Resources



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Environmental Programs Action Team

EPAT

REPORT

July 1995

North Carolina Department of Environment, Health and Natural Resources

TEAM MEMBERS	Warren Boyette, *Division of Forest Resources*
	Richard Brooks, *Division of Soil and Water Conservation*
	Kim Crawford, *Division of Coastal Management*
	Jessica Miles, *Division of Water Resources*
	Aaron Padgett, *Division of Radiation Protection*
	Jim Simons, *Division of Land Resources*
	Joan Troy, *Division of Solid Waste Management*
	Forrest Westall, *Division of Environmental Management*
	David Williams, *Office of Waste Reduction*
	Don Williams, *Division of Environmental Health*
	Jay Zimmerman, *Division of Environmental Management*
Staff Support	Lisa Zywicki, *Administration*
Facilitators	Bill Woodward and Vic Cocowitch, *Kiel, Woodward & Associates Management Consultants*

Environmental Programs Action Team

EPAT

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PROCESS AND REPORT SUMMARY

Creation of the Environmental Programs Action Team

In 1989, the Department of Environment, Health and Natural Resources (DEHNR) was created through legislative reorganization of North Carolina's environmental, health and natural resource management programs. The plan of reorganization included a provision that, five years from its inception, the newly organized department would be reviewed and re-evaluated for its efficiency.

In March 1995 DEHNR Secretary Jonathan Howes asked division directors to recommend individuals to serve on a team to examine the department's organizational structure of environmental programs. Directors were asked to select division employees who could be expected to think creatively, critically, and free of a "turf" agenda. Each team member was also required to be able to devote half of his or her work time over a period of several months for the project. Divisions represented on the team were Coastal Management, Environmental Management, Land Resources, Radiation Protection, Soil and Water Conservation, Environmental Health, Water Resources, Solid Waste Management, Forest Resources and the Office of Waste Reduction.

EPAT'S Mission

The team's first meeting took place on March 14, 1995, with Deputy Secretary Steve Levitas. The purpose for the team, according to the deputy secretary, was to fulfill the 1989 legislative request that a review be conducted, and to address concerns currently being expressed by legislators and members of the public about the way government organizations conduct business. The deputy secretary noted, for example, that a common complaint received by the department is that various water-related programs seem to overlap or duplicate one another. Team members were informed that their task was not limited to recommendations that require a restructuring of current organizational arrangements; nonstructural recommendations that address issues without reference to organizational arrangement were also welcomed. Team members were also advised that they should not attempt an in-depth analysis of each environment-related program within the department, but that they should define their own mission and set guidelines for proceeding.

The deputy secretary stressed that guiding principles behind any recommendations should be "efficiency, effectiveness and accountability to customers," and that performance from the customer's point of view should be of primary concern. Beyond these principles, the department had no particular design or agenda for team members to pursue.

As a result of this initial meeting and subsequent interviews by team members with Steve Levitas, the team developed the following mission statement:

"The Environmental Programs Action Team (EPAT) will develop and analyze different organizational scenarios to identify opportunities and strategies for improving the performance, efficiency and customer service of the department in carrying out its mission."

The deputy secretary's pledge that the team would receive full departmental support for its independence and for members' needs for cooperation from supervisors and staff was honored from the beginning of the process to its conclusion. EPAT received assistance from a consulting firm and from a member of the executive support staff. Consultants Bill Woodward and Vic Cocowitch served as facilitators, providing advice and technical support on the team's process. Lisa Zywicki, special assistant to Steve Levitas, provided administrative support and participated in the process upon request. Rotating pairs of team members met periodically with the deputy secretary to provide updates on progress.

EPAT operated with complete autonomy and received no unsolicited instructions from the department. However, EPAT specifically requested guidance from the deputy secretary on which programs within DEHNR were to be evaluated from a broad list developed by team members. EPAT was advised that the following programs were exempted from review: Wildlife Resources, Marine Fisheries, and Parks (except the Natural Heritage Program).Forestry program review was limited to best management practices and wetlands activities.

Ground Rules

One of EPAT's first tasks was to determine its guidelines for functioning. Ground rules for operation included the agreement that there be no voting to resolve conflicts in discussion. No chair was appointed, nor did any one team member assume a leadership role. Most issues were resolved by consensus through compromise. No factions were created among team members, and members were routinely polled at the conclusion of group brainstorming sessions to ensure the team's consideration of all members' viewpoints. For the most part, details of team discussions were confidential, except when the need to gather information on certain issues required some disclosure of subjects under scrutiny. The facilitators kept discussions on track.

EPAT's next step was to gather information to create organizational scenarios. Tools used for gathering and analyzing information were the sharing of knowledge, experience and ideas among team members, interviews with "customers" (including both people within the department and people affected by the services, functions and regulations of the department), and the development of "process maps."

Customer Interviews

As part of EPAT's mission to seek ways to improve the department's performance with respect to customer service, EPAT members interviewed customers, or persons who are associated with the department as members of the regulated community, as public citizens who rely on department services, or as staff. Among those interviewed were permit applicants, consultants, environmental group representatives and state and federal employees.

Interviews with customers were based generally on themes ranging from general service delivery by the department to specific problems in various programs. (See Appendix B.) Specific subjects of discussion were determined by both interviewers and interviewees. Among the many subjects addressed were jurisdictional overlap, departmental accountability, turnover of permitting staff, data management, technical review, consistency in regulatory standards, and courtesy and efficiency.

One of the most important themes to emerge from these interviews is the need to increase dialogue between customers and department staff. In addition to providing EPAT a survey of concerns to address, the feedback from these interviews offered insight into problems and suggested solutions from a wide variety of perspectives.

Process Mapping

"Process maps" are diagrams that show the relationship of a given agency task or service to the persons who seek, receive, or perform that service. (See Appendix C)

Processes selected by the team for review were based on the following criteria: apparent overlap in function or jurisdiction; lack of accountability within the process steps; the number of customer contacts; number of people affected; frequency of occurrence for an issue the process is designed to address; incidence of fragmentation within a process; and degree of complexity.

EPAT selected the following six processes to analyze:

- Non-point source pollution from construction and development,
- Wetlands 401 certification
- Public well development
- Groundwater remediation
- Wastewater disposal
- Financial assistance

Each process was reviewed by a work group of three to four team members, which included at least one member more familiar with the process. The first step in the analysis was to create a diagram or "relationship map" to identify the key process participants and their relationships and interactions with one another. Using this information, the group developed a flow chart or "is" map of how the process currently functions. The flow chart mapped steps of the process in chronological order and matched a key participant to each step.

Group members then interviewed key process participants to help identify problem areas. Common problem areas identified by work group "is" maps are:

- Lack of accountability results from fragmentation in a process.

- A high turnover of permitting staff results in a lack of staff expertise, which in turn causes delays and inconsistencies in a process.

- Limited or non-existent customer access to information on processes results in delays, lower levels of compliance and poor service.

- Coordination and communication is often lacking among divisions that are working on the same process.

- For certain divisions, regional offices often appear to be more responsive than the central office.

The groups next collected data on customer experiences and evaluations of the department's performance. This information was used to develop a new flow chart, or "should" map of what an alternative or ideal process would look like to achieve maximum efficiency, improved effectiveness and enhanced customer service. Since the purpose of a "should" map is to demonstrate ideals in organization, such maps are designed despite the existence of practical considerations that might ultimately determine an organizational structure.

Common recommendations for improvements that were identified by work group "should" maps include:

- Technical assistance should be incorporated into regulatory functions.
- Up-front technical assistance should be enhanced to eliminate delays and improve compliance.
- Customers who cannot afford consultants need a higher level of assistance.
- All customers need clearer guidance from the department on agency processes.
- Some programs should be decentralized and moved closer to the customer.
- Coordination between regional and central offices needs to be strengthened.
- A referral system for contacts and information among agencies would strengthen program efficiency and improve customer service.
- Cross-training, including process analysis training, could improve staff performance and job satisfaction.
- The department should improve accountability by more clearly defining agency roles and responsibilities, especially in processes that involve more than one agency.
- Data collection among different divisions or state agencies should be coordinated.

- Redundancies in processes could be reduced by improving staff access to data that is used by other divisions or state agencies that perform similar tasks.

Upon completion or near completion of a process map, group members presented their work to the full team for discussion. The process maps varied in complexity and usefulness, with some deemed useful for further investigations and others found to require little or no additional review. The activity of process mapping provided structures for discussion and the basis for continuing customer interviews.

Organizational Scenarios Based on Structural Concepts

Themes that derived from the process mapping exercise and customer interviews were used to discuss and evaluate preliminary organizational scenarios, or outlines for structural changes. New work groups were formed to develop these scenarios based on the knowledge gained by the process mapping exercises. Like the process maps, scenarios created by the work groups were presented to the full team for discussion.

To arrange the scenarios into organizational charts, the team experimented with both traditional and nontraditional conceptual schemes. Four main schemes used by the team to develop scenarios were "media," "process," "customer," and "decentralization." Each is described below.

Media

This organizational model is an effort to address the fact that, under the current organization, customers are often uncertain which agency handles a given problem. The designers of this scheme suggest that if the department were organized according to the media that certain activities address or involve, customers would have a better understanding of which agency is responsible for a given problem. Another objective of this scenario is to structure programs, whenever possible, to accommodate customers' desires to deal with only one government agency for a given problem.

The EPAT reaction to this scheme is generally positive, although not without reservations. Some team members are concerned about whether organization by media is workable or whether the simplicity of the approach is suited to the complexity of certain program functions.

Media 2

This organizational model represents a minor variation of the media-based scenario described above. For example, all non-point source related functions are consolidated, as they are in the media-based scenario, but in this second media-based version, these functions are consolidated in the Land Division.

Process

The process-based scenario groups all activities within the department's environmental programs according to the process or function performed, regardless of the media involved. Several sections within current divisions use this model. Under this scenario, proposed divisions would include "Permitting," which would include any permitting activity that is currently spread among current divisions; "Compliance," which would, in effect, be the enforcement arm for all the environmental regulatory programs within the department; "Direct Assistance, License and Certification," which would combine non-regulatory program assistance functions, and "Planning and Analysis," which would include data gathering, technical support, planning, laboratory report and standards recommendations.

General reaction from EPAT members is that this structure's disadvantages outweigh its advantages. However, EPAT suggests that this scheme has conceptual value as an organizational device for examining the "big picture" in department services, and may have value for implementation at a lower organizational level in the department, such as the section or branch level.

Media-Functions Hybrid

Structure by media implies organization of programs into divisions based on the primary media addressed by those programs, such as air, water or land. The media and functions hybrid scenario is based on an effort to organize the department's environmental programs according to process or function along with media, in contrast to the process model described above, which discounts media as a boundary. As a result, this organizational scheme closely resembles the current structure of DEHNR. One of the key organizational objectives of this scheme is to reduce the need for multi-agency involvement in a given activity. EPAT support for this scheme is fairly strong, but not unanimous.

Far Out

This organizational scheme, dubbed "far out" by its designers, generally relies, as does the decentralization scenario, on the premise that regional offices should be given greater responsibility for the implementation of programs. The far out scenario specifically focuses on ways to implement the objective of strengthening the interaction between agencies and customers. EPAT is generally not in favor of this model, primarily because the proposed changes seem more sweeping than necessary to address specifically identified problems. However, although EPAT has determined that the disadvantages of this scheme outweigh the advantages, there is general agreement that the arguments in favor of the scheme are strong, and should prompt further investigation for ways to increase the customer's proximity to the decision-making activities within the department.

Customer

Under the customer-based scenarios, all environmental programs would be organized according to the primary customer served by the programs. The five divisions proposed for the department's environmental programs would be Business and Industry; Local Government; Agricultural and Silvicultural Operations; Private Landowners and Real Estate Developers, and Multi-Media Technical Support. General reaction from EPAT members is that the arrangement is unrealistic, but offers a valuable exercise for thinking from the perspective of the customer.

Decentralization

The decentralization scenario is based on the premise that programs may serve the customer better when offered at closer geographic proximity to the customer, i.e., at the regional rather than central level. Support for this idea is often expressed by the accusation that an "ivory tower" mentality prevails in the central offices, where those responsible for developing policy are too far removed from implementation. According to this structural concept, certain programs that are currently managed centrally should be shifted to regional offices.

EPAT's response to this scenario is mixed, with general agreement that the concept of decentralization deserves the department's attention, but there was no strong consensus that this version should be implemented. Some EPAT members question the validity of the premise that a regional focus necessarily translates into better service for the customer.

The process of moving from an evaluation of certain programs to the development of scenarios and the conversion of scenarios to organizational charts demonstrated to EPAT the complex relationships of certain functions across divisional lines and the practical necessity for drawing artificial, sometimes arbitrary, boundaries around them for structural purposes. The organization charts were useful for illustrating how changes in a given program might affect the larger structure within which that program operates.

Organizational Scenarios Based on Issue Analysis

EPAT turned its attention from scenarios designed according to conceptual schemes to examine certain issues suggested by team members in full team discussions. These issues, which identified specific targets for change and improvement in the current organizational structure, were chosen by members as a culmination of all previous discussion, customer interviews and process analyses.

Generally, problems common to many of the issues that EPAT selected for review included:

- Overlap or duplication in programs
- Fragmentation of programs
- Poor coordination between agencies
- Unclear or lack of accountability
- Conflicting philosophy between divisions
- Conflicting standards between divisions

EPAT members developed a list of concerns that organized the issues thematically and formed work groups to examine these issues and suggesting scenarios for solution. The scenarios were described rather than illustrated in most cases, although some work groups designed organization charts to accompany their suggested solutions. The themes or "grand issues" and the specific issues grouped under them are generally discussed in terms of the concerns they raise and the advantages or disadvantages of the scenarios that the groups offered in response to them. Most of the discussions accompanying the grand and specific issues are followed by general recommendations.

This secondary round of scenarios offers discrete solutions to specific issues, rather than the more sweeping organizational changes described in the preliminary, concept-based scenarios. However, in most cases, EPAT offered more than one scenario or solution in response to the issues under review.

A general outline of the subjects addressed by this section follows.

Non-point Source Water Pollution Control

Non-point source programs constitute a substantial portion of the departments' environmental efforts. Suggestions for improvement identified by EPAT within this broad category of responsibility target problems of fragmentation and overlap in responsibility between various agencies, inconsistency in application of rules, and the need for better coordination of various agency efforts.

Central Versus Regional Perspective

Under the current organizational structure of most of the department's environmental divisions, greater emphasis is given to policy development and implementation of program functions by a central as opposed to a regional office. This section addresses whether the division of responsibility between central and regional offices should be altered to give increased responsibilities to regional offices.

Fragmentation and Overlap of Water and Wastewater Issues and Activities

The involvement of multiple divisions in activities relating to water and wastewater has led to overlaps and fragmentation of responsibility among divisions and continual frustration and confusion among customers. The issues EPAT addressed in this section concern the lack of coordination of water resource planning efforts and health protection measures among divisions, chiefly between DWR, DEM, DEM-WQ, DEM-GW, DEH-PWS and DEH-OWS.

Air Quality Control

EPAT's discussion of the Air Quality program within DEM focused primarily on ways to consolidate multiple inspection or permitting requirements.

Waste

With the exception of EPAT's discussion of mixed waste, issues that relate to the management of solid waste are scattered throughout other sections of the report. In addition to a discussion of mixed waste management, this section provides reference to the location within this report of discussions of other waste issues.

Technical Assistance

EPAT has had numerous discussions concerning separation of technical assistance services from delivery of specific regulatory programs. Among the concerns addressed by EPAT within this section are the customer's need for guidance on technical assistance, the competition that currently exists between agencies as a result of the separation of technical assistance from certain regulatory programs, and the desirability of making technical assistance part of every employee's job.

Nonstructural Recommendations

Each meeting, discussion, and procedural exercise demonstrated to EPAT the critical importance of certain issues, primarily of communication and education, that could not be documented on an organizational chart. Nor could the development of recommendations in response to these issues be isolated to any particular point of the process. Rather, the team's general, nonstructural recommendations evolved with each step described by this section. These recommendations are summarized in the final section of this report.

A Final Recommendation

With respect to each issue reviewed, EPAT members suggest that scenarios and recommendations be used as the basis for further investigation or study by the department. EPAT recommends that the non-structural recommendations be implemented regardless of whether there are structural changes made to the department.

As a result of intense discussion and investigation guided by customer and staff interviews, process mapping, scenario experimentation, issue analysis and team members' personal awareness of agency problems or processes that could be improved, EPAT has produced a survey of issues and an analytical foundation that may reasonably guide reorganization efforts.

CONCEPT-BASED SCENARIOS

Scenarios were developed as a logical extension of the “is” and “should” maps of various DEHNR processes. The processes mapped and analyzed included non-point source pollution from construction and development, wetlands (401 certification), public well development, groundwater cleanup, wastewater management, and technical/financial assistance. The “is” and “should” maps, combined with feedback from DEHNR employees and customers, formed the basis for identifying problems that were analyzed for structural solutions. The structural solutions became the framework for developing theoretical DEHNR organizational structures or scenarios.

Each scenario is the product of a small, three to four person work group that presented its work to the entire team, received feedback and modified the scenario accordingly. Some scenarios are developed further than others based on the team’s consensus that the investment of additional time and energy was beneficial to the overall mission.

The concept-based scenarios fall generally into four broad categories.

- Media - Structure by media implies organization of programs into divisions based on the primary media addressed by those programs, such as air, water or land. The department's current organizational structure is based chiefly on this traditional model.

- Process - Structure by process implies organization based on the type of service provided by programs within a division, whether compliance, permitting, technical assistance, or any other type of function performed by the organization. Several sections within divisions currently use this model.

- Customer - Structure by customer implies organization of programs according to customer groups, such as an industry sector, local government or agricultural sectors.

- Decentralization - A decentralized structure relies on the theory that the customer's needs are best met by moving services closer geographically to the customer. Thus, certain programs and functions currently managed centrally would be shifted to regional offices.

The scenarios included are titled:

- Media & Media 2
- Process
- Media-Functions Hybrid
- Far Out
- Customer
- Decentralized

SCENARIO: Media

Background

The composition of this work group was carried over from the work process analysis and mapping of small domestic wastewater proposals. Having dealt with the many wastewater management agencies and authorities involved with the sitting and approval of systems to manage the treatment and disposal of domestic wastewater, the group focused primarily on the need to consolidate agency decision making. A natural outgrowth of the discussions was the consideration of a media-based organizational scenario. This is the simple concept that a customer undertaking a development project with wastewater management needs would prefer to deal with one government agency. That agency would advise the developer of the most acceptable method(s) for dealing with wastewater.

The work analysis process outlined by the "is" map for wastewater management decisions was extremely complex and involved local government and several separate state agencies, including a number of divisions and sections. The interviews that followed the process analysis show customer frustration with the number of agencies involved and the different processes that have to be followed to receive government approval for particular wastewater management systems. Consultants, agency representatives, and direct customers (i.e., applicants) express the desire for consistent, helpful guidance from preferably one point of government contact. To most, it is not essential that government approve the wastewater disposal plan without question, but that government be clear, consistent and helpful.

For example, if on-site wastewater disposal (typically the use of pretreatment of the domestic wastewater and disposal of the treated wastewater by subsurface drainage systems--septic tank, nitrification field its most basic form) isn't feasible for a particular project, an applicant has a hard time understanding why the "first-contact" agency can't provide some additional guidance. The on-site wastewater management agency, typically the local health department, refers the applicant to another agency at the state level to consider other alternatives. The work that the applicant has done to educate the first agency about the prospective project has to be redone for another agency. Sometimes this has to be repeated for another agency or even again within the same agency.

After identifying most of DEHNR's agencies that deal with wastewater management, the work group concluded that a media approach could create an organization that would consolidate decision making in a particular environmental area. Media organization is simply the consolidation of all agencies responsible for a particular portion of the environment. As generally understood, media means the air, water and land -- a concept often used to organize environmental programs at both the state and federal levels. Many DEHNR agencies are organized currently by media or waste category (i.e., Water Quality, Air Quality, Groundwater, Water Supply, Water Resources, Solid Waste Management, Land Quality, Land Resources, etc.). EPA has generally used media to organize its Washington, D.C., offices and its regional offices.

The work group's major objective was to consolidate department functions so that customers could refer their inquiries by environmental media area. For example, if an individual concerned about changes in water quality in a particular stream or river wants to better understand how the state is managing that river, he/she would contact the water management division. If acid precipitation in the mountains of western North Carolina is a concern, an individual would contact the air management division. If a developer is considering starting a business that would produce a waste product likely be placed in a landfill, he/she would contact the land management division.

Principles

- Use a simple, logical breakdown of media areas.

The use of media is not unique and really doesn't break any new ground. The work group realizes that a media organization is pretty common, but in some ways this could be a strength because it is familiar to most people. Many of the unique cross-media needs could be built into a media organization through effective management and cooperative coordination.

- Consolidate related program areas.

The work group placed related agency functions within defined media areas. For example, activities related to the development of drinking water supplies, surface or groundwater, were relegated to the water supply section of the water management division. This includes the stream or groundwater classification process, the watershed protection program, the wellhead protection program, and all procedure/regulation development activities for drinking water. This concept was followed for the combination of wastewater management activities, solid waste management programs, hazardous waste management functions, and for all other program areas.

- Reduce the number of program contacts and simplify overall decision making.

Under the current organizational structure, wastewater management is divided between the local health department, the Division of Environmental Health and the Division of Environmental Management. From the process analysis, the group concluded that a better way to make wastewater management decisions was to develop a "should" map for that process that consolidated agency decision making into one organization. It seems to make little sense, for example, to have one agency and decision making process (including the people involved) for treated wastewater when it is placed beneath the ground and then to have an entirely different agency and decision making process when that same pretreated wastewater is applied to the surface of the ground.

Considering that the physical, chemical, and biological processes that the wastewater experiences in these two disposal/treatment examples are very much the same, such a system seems even more questionable. The media concept combines these functions into one water pollution control section. This approach was followed in combining other program areas. In relation to top decision making, the current organizational structure in the management of wastewater and in the development of water supplies has no top resolution mechanism below the deputy secretary level. The media proposed structure places water management decisions at the division director level.

- Simplify program management.

There was no intentional effort to reduce the number of divisions in the department; however, when media is used to combine functions, there doesn't appear to be a need for the current number of divisions.

- Remove agency overlap and project review duplication.

Consistent with the last two principles, this principle is actually an effort to place management agencies together so that the regulated and interested public can find out where a particular project is in the review/decision making process.

- Place regulatory development activities with operational program aspects.

One of the most frequent employee concerns is that the staff who develop regulations and procedures are often isolated and separated from the day-to-day program decision staff. This often results in unrealistic, and difficult to implement, regulations and procedures/policies. This scenario attempts to place the regulatory development functions with the operational program aspects. For example, the stream classification process is divided into water supply and non-water supply classes/standards. Since human consumption of water is the primary water supply objective, these program aspects fit best in the water supply section. Because ecological protection of streams is the primary goal of most other stream classes, these functions are placed in the water pollution control section. Issues involving swimming waters and standards established for the protection of human consumers of fish and shellfish will require inter-sectional coordination. Decision making would remain at or below the division level.

- Provide an organizational concept that incorporates existing DEHNR work groups -- promotes ease of transition.

Many of the proposed combinations take existing work groups and place them with organizations with consistent or overlapping responsibilities. Where it may be necessary to split existing work groups, there are important principles that require that action. For example, the separation of existing stream classification functions is necessary to accomplish the principle of keeping regulatory development activities with the operational program aspects (water supply and water pollution control sections). While a considerable amount of sub-section level reorganization will be required to implement this concept, most existing work groups will not be separated to place the groups in the proposed structure.

- Provide increased coordination/program delivery at the regional level.

One strong, clear message from the customer interviews is that customers often believe they receive more attention at the regional level. While this response seems to vary from customer to customer and from region to region, most customers like having a regional contact close to the area of the environmental concern. Meeting customer needs at the closest point to the customer will require strengthening regional program resources. This could be accomplished by regional position assignments, stronger regional decision making, delegation of certain functions to the regional level, and better overall management of regional activities.

This scenario hasn't fully defined the regional organizations. Generally, the model would call for a coordinator or regional supervisor for each program area (e.g., air, water and land).

The model provides stronger coordination and oversight through the assignment of regional activities coordination to a section chief level position at the division office. This position would be responsible for monitoring and evaluating the regional performance level.

- Incorporate technical assistance (TA) throughout the organization.

An underlining objective of this model is that regulatory agency personnel, in order to be more effective and successful, must be equipped to provide useful, basic TA information. TA doesn't need to be a separate function to program or media compliance activities. Adopting this principle would provide many points of contact to the regulated public that could help spread the benefits of the use of waste reduction as a method for reducing pollution in an economically beneficial manner. The proposed organizational structure directs strong divisional training in TA with special TA at the assistant secretary level for confidential TA and cross-media coordination.

- Place funding programs with the appropriate media.

Each division's organization would include a section that deals with technical support. Included in this area are the department's funding and support activities for that media area. The media program functions and day-to-day operational activities should be incorporated with the funding activities. Funding needs and priorities should be tied directly to the operational aspects of a program. For example, municipal sewer and treatment needs are understood best by those individuals involved with the water pollution control section. Placing those funding programs within the water management division will help promote good information exchange.

- Include related support functions with the appropriate media organization.

The media scenario places data support activities within the appropriate divisions under the technical support section. These include information/data analysis activities such as soil interpretative services, laboratory support, geologic survey and geodetic survey activities. Soil services could logically be placed in the land management division; however, soils information is critical for on-site sewage disposal, land application of wastes and sediment/erosion control activities. Therefore, soil interpretative services are placed in the water division.

- Consolidate non-point source (NPS) water pollution control activities.

Effective coordination of NPS activities continues to be a source of disagreement and misunderstanding . The scenario places the general coordination of NPS activities under the water pollution control section. In addition, several activities that are now spread over many divisions have been incorporated into the water division. Sediment/erosion control activities, forestry best management practices review, on-site sewage, animal waste, septage disposal, and land application of wastes are now included in one division and one section.

- Promote effective coordination with federal oversight agencies.

Under current organizational structures, EPA must deal with two separate divisions on basic issues such as surface water management. The proposed structure would help produce consistent agency policy on issues such as watershed protection and coordination of Clean Water Act issues with the Safe Drinking Water Act considerations.

Description The attached prospective organizational chart is generally the representation of the proposed model. (See Fig. II-1.) The media model simply takes the programs under consideration by the EPAT and distributes them according to three basic divisions, Air Management, Water Management, and Land Management. Rather than look at assigning existing organizational structures to this distribution, the model identifies general functions currently performed in the existing divisions addressed by the process action team. The work group used the principles outlined in the background section of this scenario to assign functions to the identified sections of the model.

Pros

- Consolidates top management, promoting in principle the idea of consistent policy.
- Consolidates wastewater management in one agency.
- Consolidates water management/information transfer into one agency.
- Consolidates environmental agencies within the department and promotes consistent coordination with EPA.
- Integrates funding programs with technical/regulatory portion of the program.
- Incorporates TA as a responsibility of the regulatory staff.
- Assigns non-point source water pollution management decisions to one agency.
- Incorporates technical support functions with those regulatory programs that frequently use that information, yet keeps them separate from day-to-day enforcement/compliance activities.
- Strengthens regional input and oversight by providing an advocate at the section level within each division.
- Provides cross-media coordination at the director and assistant secretary levels.
- Promotes the concept of one agency/one decision by media.

Cons

- Incorporation of on-site sewage and water supply into a water agency, separates traditional environmental health functions at the local health department level.

- Not all non-point source agencies are incorporated into the water agency.
- Creates a large water agency with some difficult internal management problems.
- Separates the TA aspect of the Forest Resources Division from the forestry BMP evaluation process (i.e., forest management experts stay with state forest agency and moves regulatory aspect to the water management division).
- Doesn't address coordination issues between groundwater management and solid waste management (i.e., leaves it basically the way it is now).
- Creates a major reassignment of division responsibilities.
- Leaves important sub-sectional decisions for future resolution.

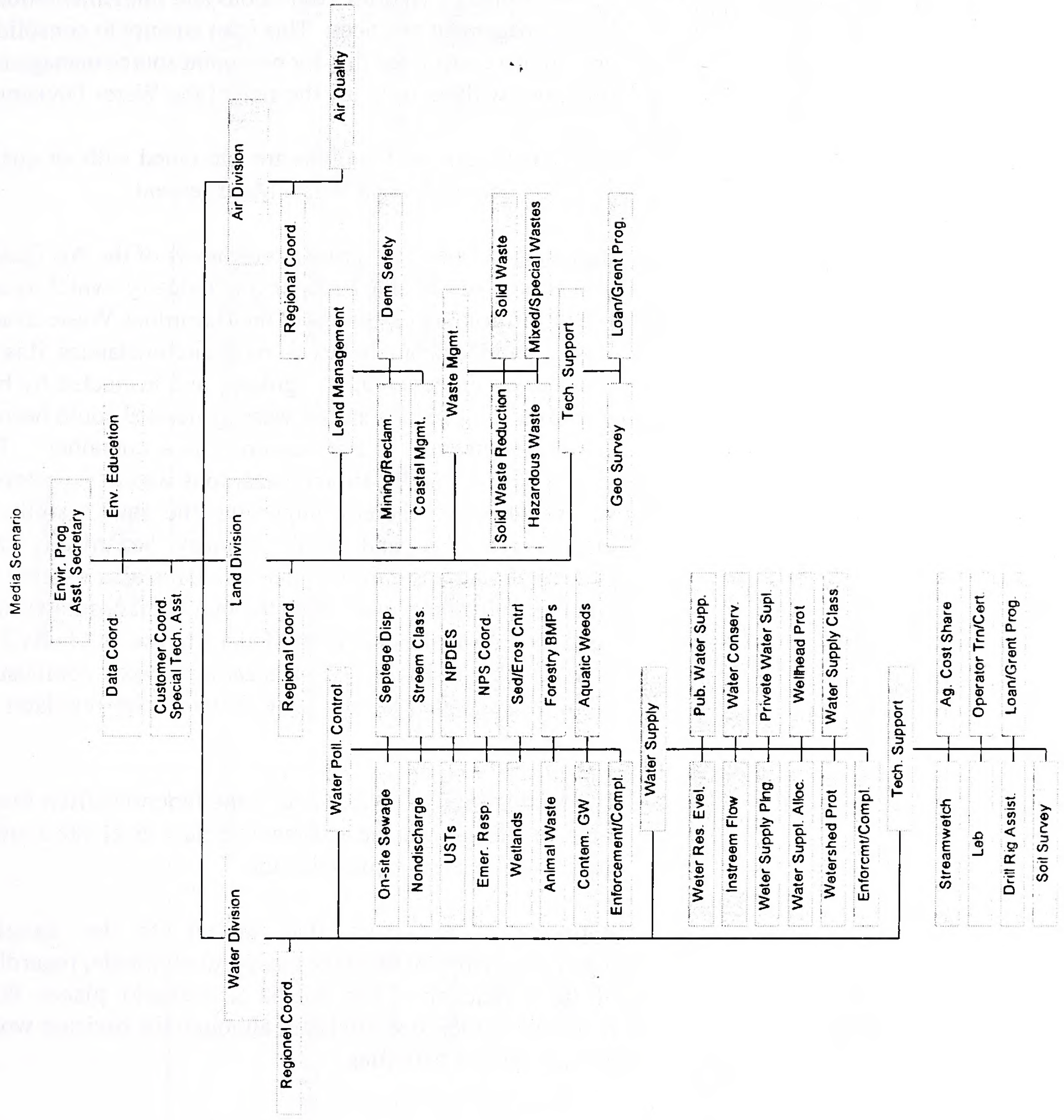
Change From Existing Organization

The most dramatic impact of this structural proposal is the reduction of the number of divisions and the combination of environmental health functions with environmental programs. These changes, if pursued, would require specific revisions in how the department deals with established state commissions and with local health departments.

The cons listed above identify the areas where coordination is most needed if aspects of this scenario are pursued. It will be necessary to look carefully at the department's relationship with local health departments. The local health specialists provide an important first line of support on issues such as on-site wastewater management, well sitting, and general information exchange with departmental customers. This aspect needs strengthening rather than weakening. Changes in the environmental health portion of the department could cause friction with the local health departments.

EPAT Response

Throughout the development of the media scenario, response from the team members has been generally positive. Most members feel that some form of the media approach makes the most sense for the department and would have the least disruptive effect on the current structure. Other scenarios, such as Media-Functions Hybrid, are based on the media concept. Based on feedback from the group, the original organizational chart has been modified. No one in the group believes this model/scenario *alone* is the overall solution, but it could be the beginning point for organizational change.


Media Scenario
Envir. Prog Asst. Secretary
Env. Education
Data Coord.
Customer Coord. Special Tech. Asst.
Air Division
Regional Coord.
Air Quality
Land Division
Regional Coord.
Land Management
Mining/Reclam.
Dam Safety
Coastal Mgmt.
Waste Mgmt
Solid Waste Reduction
Solid Waste
Hazardous Waste
Mixed/Special Wastes
Tech. Support
Geo Survey
Loan/Grant Prog.
Water Division
Regional Coord.
Water Poll. Control
On-site Sewage
Septage Disp.
Nondischarge
Stream Class.
USTs
NPDES
Emer. Resp.
NPS Coord.
Wetlands
Sed/Eros Cntrl
Animal Waste
Forestry BMPs
Contam. GW
Aquatic Weeds
Enforcement/Compl.
Water Supply
Water Res. Eval.
Pub. Water Supp.
Instream Flow
Water Conserv.
Water Supply Plng
Private Water Supl.
Water Suppl. Alloc.
Wellhead Prot
Watershed Prot
Water Supply Class.
Enforcmt/Compl.
Tech. Support
Streamwatch
Ag. Cost Share
Lab
Operator Trn/Cert.
Drill Rig Assist.
Loan/Grant Prog.
Soil Survey

SCENARIO: **Media 2** (See Fig. II-2.)

Differences from Media Scenario

- All non-point source related functions are consolidated as in Media, but they are placed in the Land Division.

  Rationale: Non-point source pollution control is largely accomplished by land-use restrictions and implementation of best management practices. This is an attempt to consolidate and improve accountability for non-point source management functions without inflating the size of the Water Division.

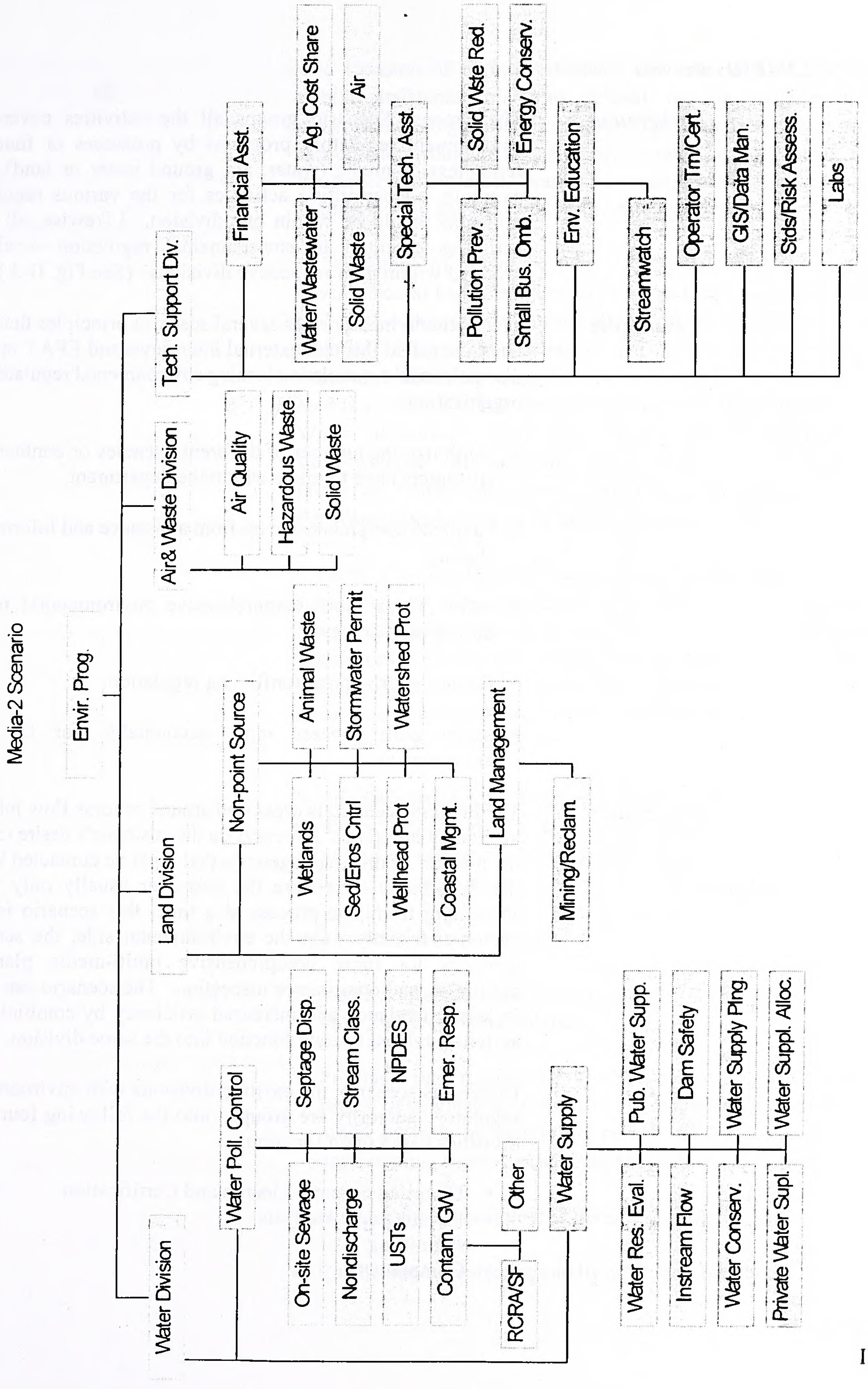
- Waste management functions are combined with air quality in a Division of Air and Waste Management.

  Rationale: One of the primary customers of the Air Quality Division in the Media 1 scenario is industry, which is also one of the primary customers of the Hazardous Waste Branch in the Land Division. In fact, in most circumstances, it is the exact same process that is regulated and inspected by both organizations. The hazardous waste generated could become air emissions if it is not captured in a container. This consolidation enables air and hazardous waste inspectors to be cross-trained, thereby improving the state's ability to inspect all large and small quantity hazardous waste generators and air emission sources. This also reduces the number of divisions with which the industrial customer must typically interact from three in Media 1 to two in Media 2. It is reasonable to have solid or hazardous waste combustion facilities regulated by the same division that regulates air emissions.

- The Media 2 scenario also collects the functions from Media 1 that are dangling at the assistant secretary level into a multi-media Technical Support Division.

  Rationale: Programs that appear to be danglers organizationally are often the easiest to eliminate, regardless of their function. The Media 2 scenario places these functions in their own division, although the division would include diverse activities.

Fig. II-2


Media-2 Scenario
Envir. Prog.
Water Division
Water Poll. Control
On-site Sewage
Nondischarge
USTs
Contam. GW
Septage Disp.
Stream Class.
NPDES
Emer. Resp.
Other
RCRA/SF
Water Supply
Water Res. Eval.
Instream Flow
Water Conserv.
Private Water Supl.
Pub. Water Supp.
Dam Safety
Water Supply Plng.
Water Suppl. Alloc.
Land Division
Non-point Source
Wetlands
Sed/Eros Cntrl
Wellhead Prot
Coastal Mgmt.
Animal Waste
Stormwater Permit
Watershed Prot
Land Management
Mining/Reclam
Air& Waste Division
Air Quality
Hazardous Waste
Solid Waste
Tech. Support Div.
Financial Asst.
Water/Wastewater
Ag Cost Share
Solid Waste
Air
Special Tech. Asst.
Pollution Prev.
Solid Wste Red.
Small Bus. Omb.
Energy Conserv.
Env. Education
Streamwatch
Operator Trn/Cert.
GIS/Data Man.
Stds/Risk Assess.
Labs

SCENARIO: Process

Background

The Process Scenario groups all the activities covered in environment regulatory programs by processes or functions regardless of media (water, air, ground water or land). For example, all permitting activities for the various regulatory divisions would be within one division. Likewise, all other activities essential to environmental regulation would be grouped within their respective divisions. (See Fig. II-3.)

Principles

This scenario incorporates several scenario principles that have been identified through external interviews and EPAT internal discussions as desirable in planning environmental regulatory re-organization:

- Minimize the number of different agencies or contacts that customers have to make within the department.
- Facilitate comprehensive up-front assistance and information sharing.
- Allow for a more comprehensive environmental review during each process.
- Reduce overlapping/conflicting regulation.
- Make each process more accountable for the total environment.

Description

The Process Scenario is organized around process flow inherent in existing programs. It focuses on the customer's desire to limit the number of different agencies that must be contacted within the department. Because the customer usually only wants something from one process at a time, this scenario is very customer-friendly. On the environmental side, the scenario provides for more comprehensive multi-media planning, permitting and compliance inspection. The scenario can result in less redundancy and increased efficiency by combining all activities related to each function into the same division.

Under this scenario, the existing divisions with environmental regulatory authority are grouped into the following four main divisions based upon function:

- Direct Assistance, License and Certification
- Planning and Analysis
- Permitting
- Compliance

The Division of Direct Assistance combines non-regulatory public assistance functions related to the department's environmental regulatory programs. Functions included within this division would include environmental education, technical assistance and outreach, financial assistance (loans and grants), public training and operator certification programs.

A Division of Planning and Analysis would include environmental background monitoring and data gathering and technical support for the other divisions, as well as general technical support for external customers, environmental planning, laboratory support, and environmental standards recommendation. The division would draw functions from Water Resources, Soil and Water, Waste Reduction, Environmental Management, Land Resources, Radiation Protection, Coastal Management, Solid Waste Management and the Water Supply Section of Environmental Health.

Permitting groups from the Divisions of Coastal Management, Environmental Management, Land Resources, Radiation Protection, Solid Waste Management and the Water Supply Section of Environmental Health would be combined into a new Division of Permitting. Likewise, compliance monitoring and enforcement personnel from the same divisions would be shifted into a Division of Compliance.

Within each division, the fields of expertise could be grouped by media (water, air, etc.) or by category of customer generally served. This scenario would facilitate cross training in related fields to allow broader service to each customer by each personnel. Coordination across media could be better administered within one division

Pros

- Improves coordination for data collection and allows for a more comprehensive database.
- Provides opportunity for comprehensive environmental review of cumulative effective of multi-media permitting for major projects by facilitating permit review and issuance coordination, thereby enhancing environmental protection.
- Is easier for the customer to determine who to contact.
- Can be implemented regionally or at the central office.

- Consolidates funding assistance programs into one division, thus better allowing the department to put together funding packages that currently reside in different divisions.
- Reduces repetitive program functions for the same process.
- May be useable within divisions organized under another scenario.
- Increases proficiency for each process.
- Is easier for less knowledgeable customers to get through the process.
- Provides for overall environmental accountability, particularly within each process.
- Enhances the importance of environmental resource planning and analysis.
- Maximizes travel efficiency because the multi-media makeup of the inspector/team allows inspection of all environmental regulatory concerns during one trip.
- Reduces redundancy by combining similar processes together, instead of every division developing overlapping abilities.

Cons

- Fragments compliance monitoring from permitting.
- Reduces accountability by media.
- Changes drastically current funding setups, allowing for greater political pressure to impact decisions.
- Could reduce support from contingency groups.
- Could make Compliance Division unpopular with the public, hence reducing support/funding for monitoring and enforcement.
- Could reduce employee job satisfaction by limiting the scope of responsibilities.
- Requires extensive changes of delegation by policies, rules and possibly legislature.

- Divides the divisions into widely varying sizes.

- Requires customer to deal with different divisions/agencies for different aspects of their projects.

Change From Existing Organization

Elements of this scenario are already in use within the media sections of the Division of Environmental Management. For example, the DEM Water Quality Section has a permitting branch, planning branch, etc. This scenario on a large scale would be a significant change from the current programs. Presently, each program handles its own public assistance, data gathering, planning, analysis, permitting and compliance activities. Funding and personnel from each program would have to be reallocated to each process function.

The primary advantages of the Process Scenario are allowing the customer to go to one division for one process and facilitating more comprehensive data gathering, planning, permit review, inspection, assistance, etc. because of the multi-media resources. Some customers have expressed interest for "one-stop-shop" permitting. Because all permitting is handled within one division, "one-stop-shop" permitting can readily be incorporated into this process. "One-stop" for each function would especially help the customer who does not deal regularly with the department.

The primary disadvantage of this scenario is that the various processes of a project are divided into different divisions. The customer eventually has to deal with another division as the project progresses. Feedback from the experience with one function to the personnel responsible for another function could be more indirect and take more time. For example, possible changes in permit conditions based upon compliance monitoring would have to be referred to the Permits Division, rather than just incorporated by the permitting personnel in-house. These problems already exist to some degree under the current organization in that many projects require assistance, permits and monitoring from several divisions.

The question of who is responsible for rule-making would have to be resolved. If each division adopts rules applying to its programs, coordination and input from the various divisions would be necessary to prevent duplication and conflicting regulations.

Another issue is fee receipt distribution. Since fee receipts account for a significant amount of funding for several programs, some redistribution of fee receipts would be necessary under this scenario. On the other hand, it may be more efficient to consolidate fee collection/processing in one place.

The Process Scenario is formed around the concept of agency interdependence. It may be more efficient and effective to rely on other agencies to assist in an overall effort than it is to have each agency develop redundant capabilities to keep from having to coordinate. Failure to cooperate across division lines, and even within a division, has helped to create inefficiencies in the current environmental regulatory structure. The implementation plan for this scenario would need to include mechanisms for creating cooperation.

The scenario would require considerable initial orientation and cross-training to ensure that the high potential for interaction and coordination from the groups from various divisions is realized. Most people's jobs would be different from what they are now.

EPAT Response

In general, the EPAT believes that this scenario certainly has some merit and could provide a departmental structure that would address some major effectiveness/efficiency concerns. However, it is generally felt that the disadvantages of this scenario outweigh the advantages.

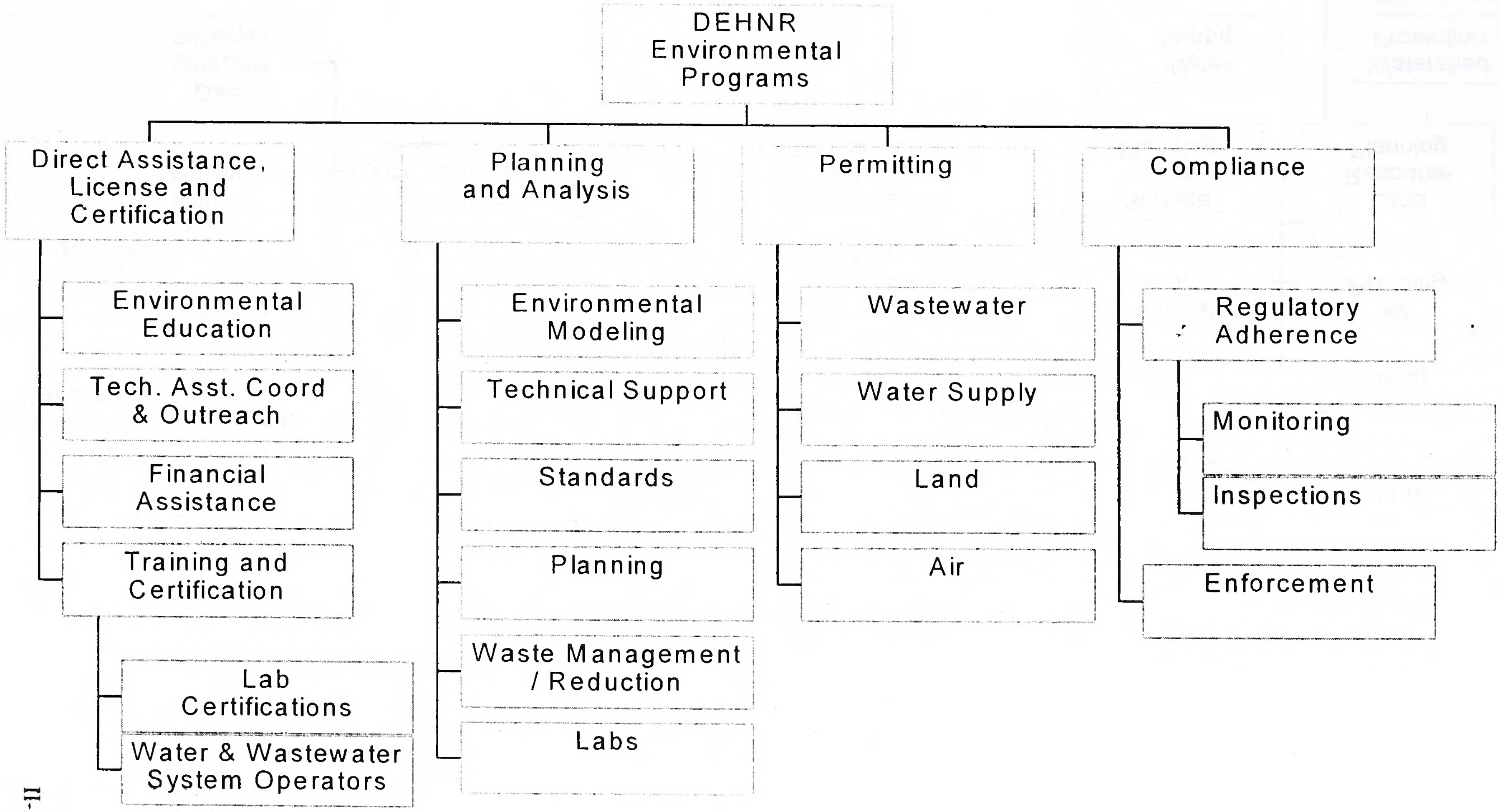
Re-organization into this scenario would be a major change and very disruptive, while still leaving significant questions of coordination and fragmentation among divisions. Additionally, this proposed separation of divisions by process would require that the departmental contact person pass the customer to another contact person for another process. Many customers have expressed a desire to continue dealing with the same agency/contact person throughout the life of the project.

On the other hand, the EPAT and department could learn from this scenario. Coordination across media lines is important to any process to ensure a comprehensive review of the "big picture" of the environment. Some of the benefits of the Process Scenario may be possible without much disruption by implementation within a smaller work group such as a section or regional office.

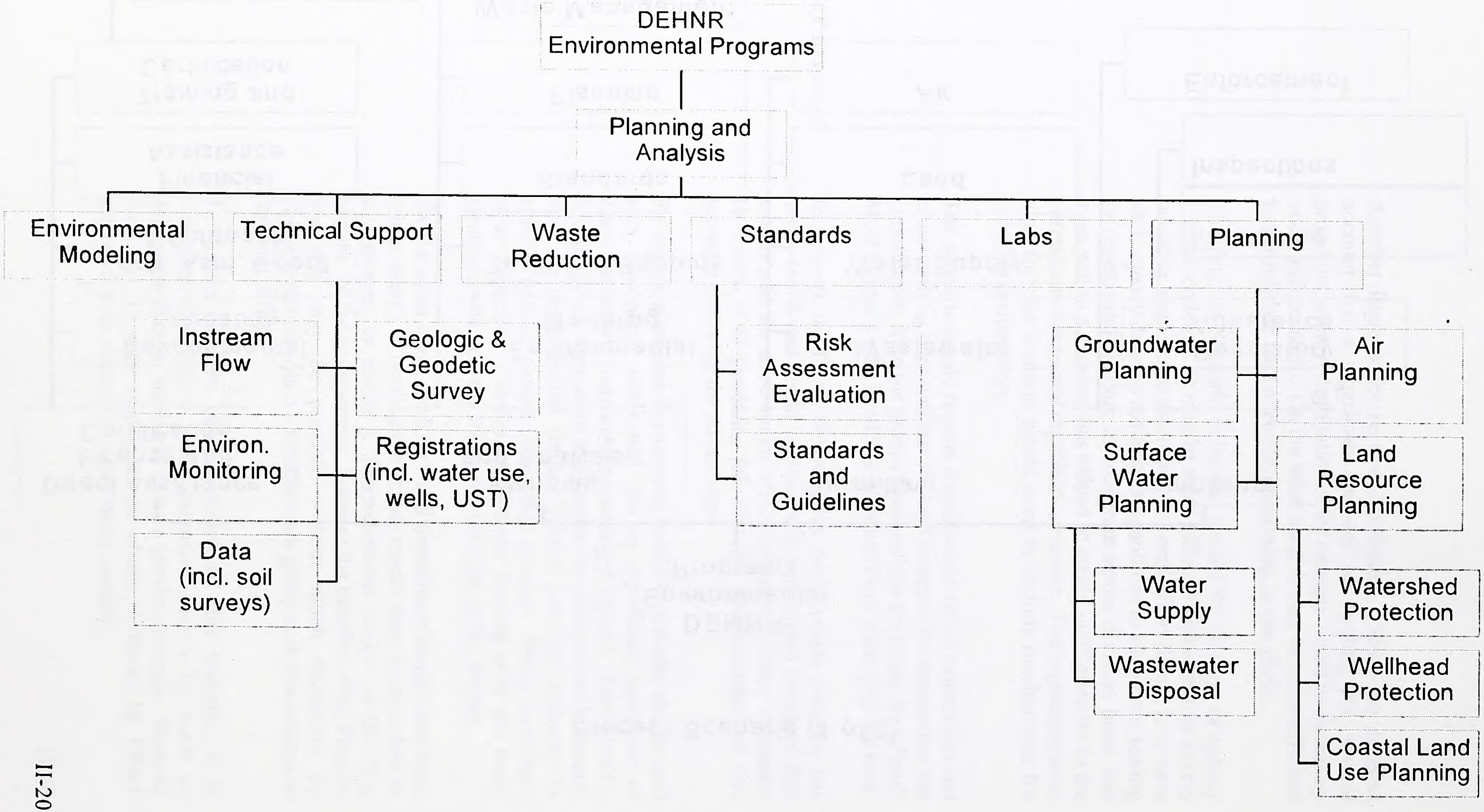
To further explore implementation of this scenario, it is recommended that a more extensive search be made to determine if other states are using a similar scenario. None of the other 11 state organizational charts reviewed by EPAT appeared to be using a process-based scenario.

Fig. II-3

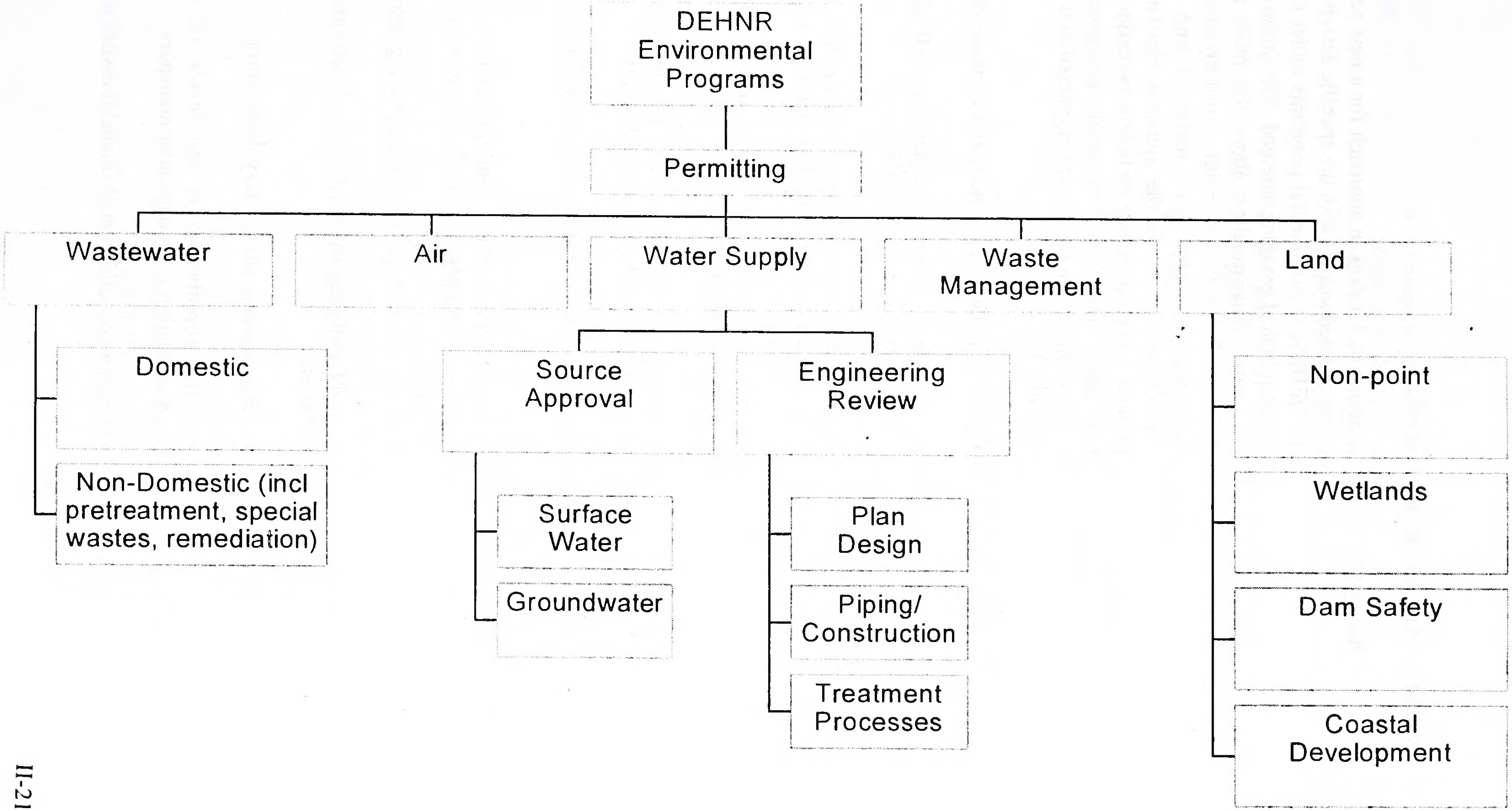
Process Scenario (1 of 3)



Process Scenario (2 of 3)



Process Scenario (3 of 3)



SCENARIO: Media/Functions Hybrid

Background

In trying to develop an approach for a new scenario, the work group decided to start with the specific activities conducted by the DEHNR environmental programs under consideration and see what logical grouping emerged. The group began by making an initial determination about the most appropriate lead agencies for activities with multi-divisional jurisdiction. Functional overlaps were reviewed and divisions were consolidated based on the apparent similarity of task and purpose. The objectives include a reduction in the need for multi-agency involvement or parallel processes and a reduction in fragmentation in the current organizational structure.
(See Fig. II-4.)

Principles

- Reduce redundancy in activities between divisions.
- Clarify the responsible agency for all issues to increase accountability and accessibility.
- Group similar activities together with their support functions to reduce the number of divisional lines to cross.
- Consider the implications on job satisfaction and maintaining quality employees.
- Maintain the health functions of public water supply under the Division of Environmental Health.
- Consider balance of number of staff people in a division.

Pros

- More customer friendly and logical, fewer people to contact and, accordingly, less conflicting advice.
- Better clarification of decision making responsibility.
- More grouping by functions and activities than currently exists.
- Reduces some unnecessary duplication.
- Better coordination at top levels of management by consolidating functions under managers.
- Greater consolidation of financial assistance programs.

- Increase in job satisfaction by having technical assistance and regulation closer together. Also, with less confusion about who does what, employees are more likely to know whom to contact and how to get help for themselves and the customers.

- Environmental protection is enhanced by reducing the boundaries between media type.

- Some accountability by media.

- By being more accountable for media at division levels, the continuity problems with senior management changeovers might be reduced.

- More balance between the size of divisions than currently exists.

- Tie in between public water supply and health is maintained. This may strengthen the impact and consideration of health on department actions.

Cons

- Three divisions have some jurisdiction over water issues.

- Water and wastewater still have divisional lines to cross, which might increase coordination issues.

- Pollution prevention is not a solid waste management issue and the significance of the multimedia element might be diminished by grouping the two.

- Remediation of soil and groundwater is still fragmented in separate divisions depending on the conditions and regulations imposed on the contaminant, although only one agency is in charge for any contamination situation.

- Lack of balance between the size of these divisions and the remaining DEHNR divisions not under EPAT consideration.

- Splitting stream classifications from water pollution control activities and putting in one place may not be appropriate because classifications are for different purposes.

- Three divisions (as opposed to two now) would regulate industrial customers for the same plant or process.

- Similar functions for water supply and wastewater would be in separate divisions (e.g., review and permitting of facilities, operator training and certification, financial assistance programs).
- Current trends favor flatter structures, but the current flatter structure creates excess fragmentation and creates excessive coordination problems.

Change From Existing Organization

One key difference between this scenario and the current organizational structure is that land and water resource issues are combined in one division since many of the land management activities are aimed at water protection. This includes primary functions of Land Resources, Water Resources, and Soil and Water, and also parts of Environmental Management. One lead agency has been specified for most activities to reduce the current lack of accountability and authority. The number of divisions is decreased. One question raised is where Radiation Protection functions should be placed. In this scenario, it is assumed that the activities would go with Environmental Health. Some discussions were held about combining the program with the Division of Air Quality. Under this scenario, the group decided that the tie to health is stronger.

Another recurring issue is the need to combine technical assistance throughout all aspects of the department's activities. This is probably as much an attitude as it is a training issue. There appears to be a consensus that additional up-front technical assistance could reduce the necessity for subsequent reviews and corrective or enforcement actions.

Although less disruptive than some other scenarios, this reorganization would be a dramatic change for a substantial number of employees. The individual job descriptions, although under new management in most instances, would not need major revisions.

EPAT Response

The EPAT reaction to this model is generally very favorable. This is an example of a hybrid scenario that encompasses multiple methods of grouping tasks or programs together -- namely, by media and by function. It addresses functional overlaps, redundancy and accountability issues. The team believe it reduces non-value added parallel processes and stumbling blocks. In addition, the number of divisions is reduced so that fewer divisional lines must be crossed and lower levels of management have greater control over resource management The public health aspect of water supply that currently resides in DEH is generally maintained, as it is for radiation protection. Close coordination between the various agencies dealing with water and water supply will still be necessary, and this scenario does not provide better coordination between the health based and environmental based water supply programs.

The defining of lead agencies for overlapping programs is a good step to help set accountability and responsibility. The combination of land and water activities together seems to clarify some overlaps and reduce redundancies while allowing for a logical grouping of outcome-oriented activities. The most serious concerns raised focus on the remaining fragmentation of water programs and financial assistance programs. The effect on multimedia waste management issues is unclear. Some believe that the combination with solid and hazardous waste management will de-emphasize the multimedia aspect needed for waste reduction activities. It appears realistic that this scenario could be implemented without dismantling the department, thereby reducing non-productive transition time.

These concerns did not deter the majority of the group from deciding that this scenario provides a good organizational alternative that could realistically be implemented without a transition period that would outweigh the benefits derived. This alternative generally enjoys strong support from team members as a theoretical model; however, support for this alternative as an improvement over current conditions is not unanimous.

SCENARIO: **Media-Functions Hybrid**

ORGANIZATIONAL STRUCTURE

(This is a conceptual list that is representative of how the department would be structured under this scenario. It does not include all functions currently performed by these agencies.)

Division of Air Quality Management

- Permitting
- Technical Services
- Planning
- Ambient Monitoring

Division of Water Quality Management

- Loans and Grants
  - loan/grant programs: sewer
  - underground storage tank trust fund

- Non Discharge Permitting
  - on site wastewater
  - land application: septage
  - land application of waste non-discharge permitting
  - wastewater recycling

- Permitting and Enforcement
  - dredging permits
  - enforcement of monitoring and inspections: coastal and waste water
  - pre-treatment of wastewater
  - inspection of underground tanks and injection wells
  - NPDES permitting
  - subsurface water quality monitoring (incl. landfills)
  - basinwide NPDES planning

- Training and Certification
  - direct technical assistance: wastewater systems
  - operator training and certification: subsurface water, wastewater collection and land application, wastewater treatment

- Remediation
  - emergency response to spills
  - remediation of soil and groundwater

Division of Waste Management

- Hazardous Waste
  - RCRA remediation of soil and groundwater under RCRA
  - direct technical assistance for hazardous waste

- Superfund
  - CERCLA remediation of soil and groundwater

- Waste Determination, Reduction, and Management
  - office of small business ombudsman
  - pollution prevention
  - energy conservation
  - landfill permitting
  - special wastes, tires, medical, white goods
  - direct technical assistance: solid waste reduction, composting
  - recycling / developing recycling markets
  - composting
  - direct technical assistance
  - enforcement of monitoring and inspections
  - waste determination

Division of Water and Land Resource Management

- Water Supply
  - water supply planning
  - water resource evaluation
  - water supply allocation
  - instream flow investigations
  - interbasin transfer certifications
  - capacity use investigations and permitting
  - registration of water withdrawals and transfers
  - water use data collection
  - water conservation
  - direct technical assistance: water loss reduction
  - stream (re)classification (HQW, WSI-V, B, C, FWS, ORW)
  - aquatic weed control
  - watershed protection
  - wellhead protection
  - direct technical assistance for land use planning
  - source review and approval (well site selection)
  - drought management
  - analysis and management of interstate water issues

- Coastal Management
  - permitting for coastal development
  - ocean resources planning
  - coastal land use planning
  - estuary and beach access (land use planning)

- Loans and Grants
  - loan and grant programs for water resource development
  - NC agriculture cost share program
  - loan and grants for access / zoning
  - water part of community development block grants

- Land Management
  - non-point source water pollution
  - soil surveys / interpretive studies
  - erosion and sediment control
  - geologic survey
  - geodetic survey
  - permitting for development, high quality waters
  - mine reclamation
  - direct technical assistance: soil and water conservation
  - wetland protection and mitigation, incl forestry BMPs
  - dam safety

Division of Environmental Health

- Operator Training and Certification

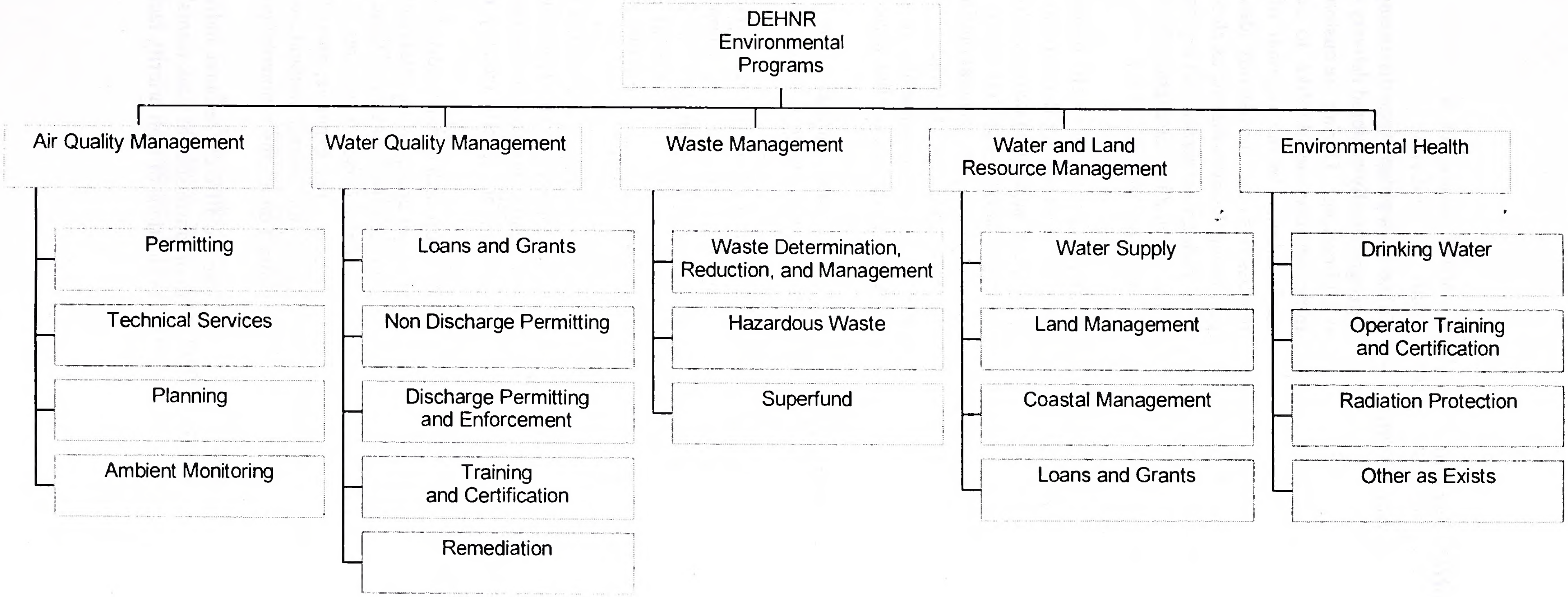
- Drinking Water
  - compliance monitoring
  - inspections
  - plan review and approval
  - data management
  - permitting/fee collection
  - direct technical assistance
  - emergency response
  - loans and grants for public water systems

- Other
  - shellfish sanitation
  - environmental epidemiology health and environmental statistics

- Radiation
  - licensing and regulation of radioactive material
  - licensing and regulation of radioactive waste incinerators
  - environmental radiation surveillance
  - regulate the treatment and disposal of mixed waste
  - regulate the clean up of radiologically contaminated soil and water
  - technical assistance
  - emergency response for radiation material
  - licensing and regulation of proposed regional radioactive waste disposal facility
  - registration and regulation of x-ray machines and tanning equipment

Fig. II-4

Media-Functions Hybrid



SCENARIO: Far Out

Background

As the work group began discussing a new scenario, the idea of a geographically-centered delivery system began to emerge as a useful concept. During the customer interviews, many people indicated they would like to see a greater delegation of responsibility to the regional offices. In addition, EPAT discussions have consistently identified a general objective of promoting decision-making as close as possible to the customer. The work group agreed that a geographic approach to program delivery could help strengthen the interaction between customer and agency. (See Fig. II-5.)

Strong support for well trained, well informed contact individuals at the local level was voiced by the group. The concept of the coordinated interaction of three basic portions of an organization -- central office, district office and satellite offices -- forms the general outline of this scenario. By using currently available technology for communication and data access, it is certainly possible to allow the use of home-based individuals within a satellite area.

Principles

- Provide ready access to the department's environmental programs through, at least initially, one individual.
- Support the initial contact person through supervision at the satellite level, technical support and day-to-day decision making at the district level, media-based program direction at the central level and overall policy consistency from top management at the central level.
- Establish strong, cross media training and support for the initial contact person. This would provide the employee the basic capability to evaluate the status of all environmental programs at a specific industry, municipality or regulated site.
- Develop each contact individual as a general resource in all program areas, while establishing specific individual work plan objectives for each of these staff so that they can become a resource person in one area of the environmental regulatory process. For example, an individual might be a resource person for coastal wetlands while serving as the primary contact on all environmental programs for several facilities.
- Use the different resource individuals within a satellite area to organize special "task teams" that could do more detailed evaluations of high priority facilities

- Organize district level offices by functional program activities, such as satellite coordination, compliance/enforcement, permitting, administrative functions, etc.

- Organize central level generally by media program area, such as air, water, land, districts, etc.

- Assign district office director the same basic organizational status and authority as central office program director level.

- Shift all operational decision making authority to the district level (i.e., permit issuance, enforcement actions, etc.).

- Direct program policy and objectives from central office, providing strong oversight and coordination of district activities. Central office looks at processes rather than getting involved in day to day decisions.

- Establish accountability for daily activities at the satellite, contact individual level.

- Promote the referral of project issues specific to a particular facility to the district and satellite level. Central office must relinquish those types of problems and establish accountability at customer contact level.

- Provide federal and legislative coordination at central level.

- Develop technical assistance (TA) policy at the central level, provide specialized TA training from the central and district level, assign specialized TA help (limited) to teams at district level, and incorporate general TA through satellite contact individuals.

Pros

- Moves decision making closer to the customer.

- Allocates more personnel resources to the districts and satellite areas.

- Provides opportunity to place primary agency contacts in specific geographic areas.

- Allows the application of communication technology to put contacts with customers (cellular telephones, laptop computers, E-mail, fax, etc.).

- Maintains media identification at central level and promotes functional activities at the district/satellite levels.
- Provides for cross-media evaluation of facilities at primary contact level.
- Primary contact incorporates permitting, compliance, TA, enforcement, etc., at one point and in one individual.
- Cuts overhead/office space needs at central level.
- Balances staff allocation better at all levels.

Cons

- Places a tremendous amount of cross training responsibility on staff at district and satellite levels.
- Demands a high degree of oversight to secure consistent program delivery at all levels.
- Increases possibility of political appointments at district level.
- Increases number of agency offices across state.
- Requires a high degree of knowledge/capability at primary contact level.
- Special task team concept requires primary contacts to be both generalists and specialists.
- May be difficult to keep highly skilled professionals and technical experts in remote locations of the state.
- Raises an issue of duplication of private services.

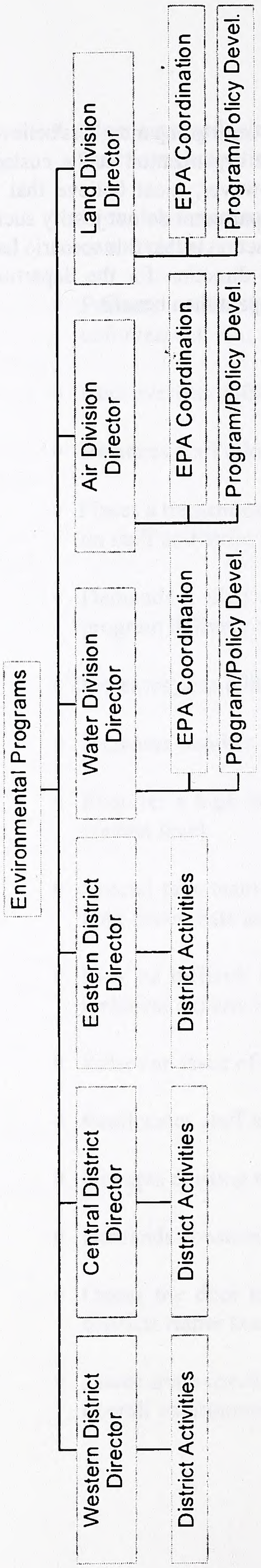
Could be Pros or Cons

- Reallocates staff levels.
- Disrupts existing regional breakdown.
- Demands constant cross training of district/satellite staff.
- Opens the door to flexibility in decision making in three districts rather than one central office.
- Places some checks and balances on media orientation versus overall environmental control programs impact.

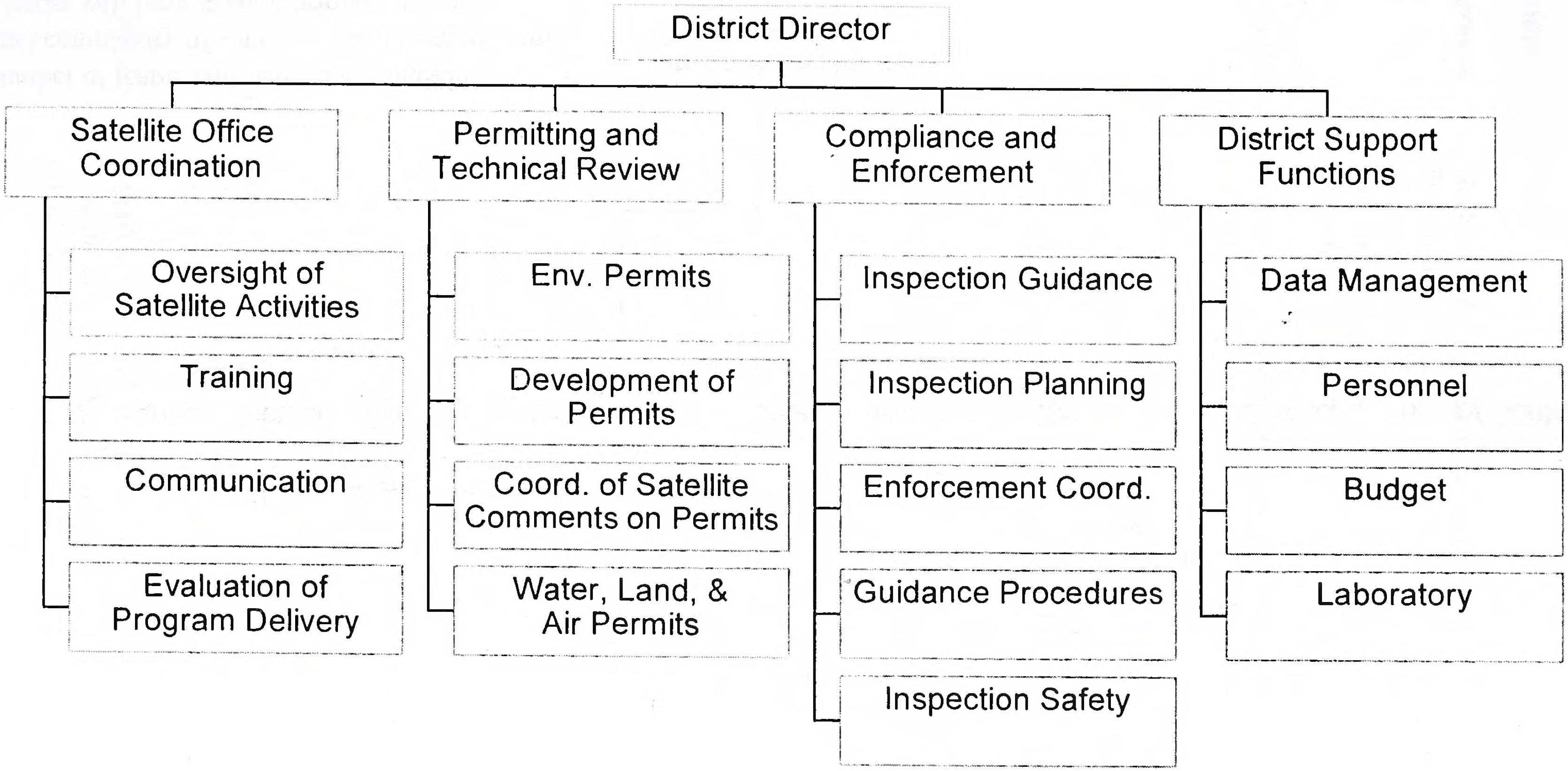
EPAT Response

Several group members believe that the concept of strengthening the organization at the customer delivery level is very valid; however, most believe that the organizational needs of the department do not justify such a dramatic change. The overall reaction is that this scenario has some valuable concepts but that its direction for the department would cause more negative impact than benefit.

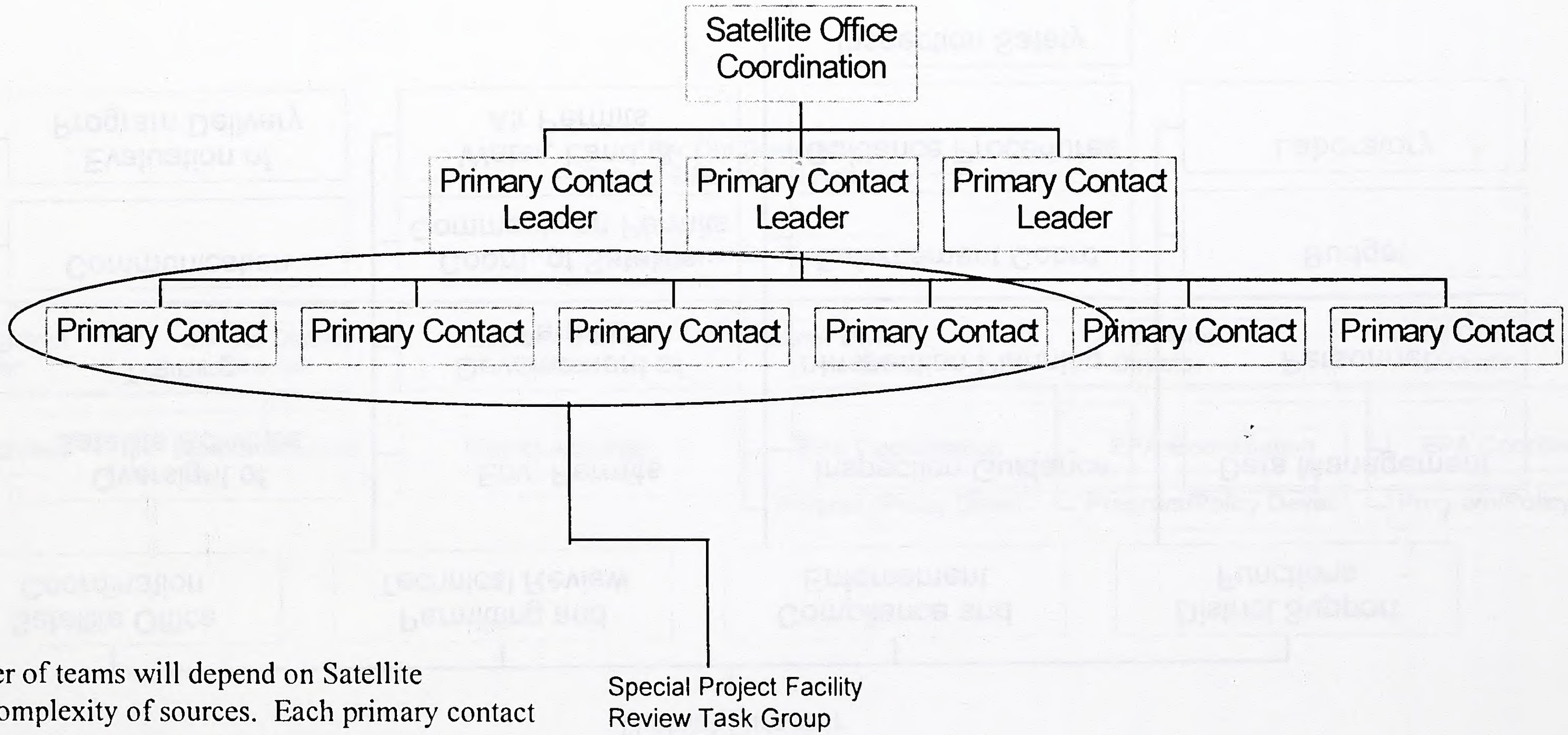
Far Out Scenario
Central Office Level Activities



Far Out Scenario
District Level Activities


District Director
Satellite Office Coordination
Oversight of Satellite Activities
Training
Communication
Evaluation of Program Delivery
Permitting and Technical Review
Env. Permits
Development of Permits
Coord. of Satellite Comments on Permits
Water, Land, & Air Permits
Compliance and Enforcement
Inspection Guidance
Inspection Planning
Enforcement Coord.
Guidance Procedures
Inspection Safety
District Support Functions
Data Management
Personnel
Budget
Laboratory

Far Out Scenario
Satellite Office Level Activities



(1) Number of teams will depend on Satellite area and complexity of sources. Each primary contact team leader will have several primary contacts.

(2) Number of contacts will depend on area assigned and activity in that area.

SCENARIO: Customer

Background

The Customer Scenario groups all environmental programs into five divisions organized by customer. For example, all activities involving business and industry (e.g., air permitting, hazardous waste management) would be combined in one division. (See Fig. II-6)

Principles

- Minimize the number of divisions with which a customer must interface and the number of handoffs on project review.
- Facilitate in-depth technical assistance to the customer.
- Reduce conflicting regulatory requirements for customers.
- Reduce jurisdictional uncertainty.
- Reduce the opportunity for pollutant shifts between environmental media.

Because major classes of customers would have to interact with only one division -- a division extremely knowledgeable about their needs and technologies -- regulatory programs would be delivered in a simpler and more practical way. Likewise, this improved efficiency should enhance the customer's ability to comply with regulations. Consideration of all environmental releases from a customer by one division should also result in more emphasis being placed on waste reduction. This should reduce the likelihood that pollutants will be transferred within media.

Description

The scenario groups functions into five divisions:

- Business and Industry
- Local Governments
- Agricultural and Silvicultural Operations
- Private Landowners and Real Estate Developers
- Multi-Media Technical Support

Each division could be subdivided by function (e.g., permitting, compliance, etc.) and further subdivided by medium (e.g., air, water, land) as depicted in Fig. II-6.

Pros

- Staff would become more familiar with the customer and would deliver regulatory programs in a more customer-friendly fashion.

- Some customers can more easily determine their fit with the department, and would potentially have a single-point of contact for all needs.
- Facilitates multi-media inspection, particularly for smaller facilities, enabling inspectors to inspect more entities.
- Facilitates multi-media coordination in permits, reducing cross-media transfers of pollutants and increasing focus on waste reduction.
- Improves coordination for data collection and management.
- Consolidates financial assistance programs by customer, making it easier for the customer to locate available resources.
- Increases overall environmental accountability because divisions are multi-media and must consider all activities of the customer, including secondary effects of activities.

Cons

- Similar functions and expertise would be duplicated in other divisions.
- Reduces media accountability.
- Implementation may require statutory changes and restructuring of funding.
- Could create a situation where funds are disproportionally directed toward one customer group.
- Could set up a perceived inequity in resource allocation, reducing public confidence.
- Could result in inequity in enforcement zeal between customer types.
- Some customers may not clearly fit in specified categories.

Change From Existing Organization

This scenario is dramatically different from the existing organization. Funding and personnel would have to be reallocated.

Issues

- This organizational approach may fit better under another model such as media or functional orientation.

- For the customer organization to operate most efficiently, permit renewal dates for a customer would need to be coordinated to enable a comprehensive environmental review.

- Functional work teams could be assigned to address particular projects.

- Cross-training would be essential to maintain job satisfaction and reduce the impact of staff departures.

- Rotational work assignments would help staff better understand the entire process for other customers.

EPAT Response

EPAT members believe that the potential duplication of resources and expertise in multiple divisions and the concern that one customer may receive disproportionate attention outweighs the advantages of this approach. However, most members generally support the premise of a customer-oriented organization and related concepts that appear as non-structural recommendations in other scenarios (e.g., Media, Far-Out, Process).

SCENARIO: Customer

NEW ORGANIZATIONAL STRUCTURE

(This is a conceptual list that is representative of how the department would be structured under this scenario. It does not include all customers and functions.)

Customers

- Business/industry
- Local governments
- Agriculture/forestry operations
- Individual property owners/real waste developers

Customer/Product Relationships

- Business/Industry
  - technical assistance
  - NPDES permit
  - process water discharge
  - storm water discharge
  - non-discharge permit
  - land application
  - wastewater recycle
  - on-site subsurface disposal
  - air permit
  - landfill permit
  - RCRA - treatment, storage, disposal permit
  - hazardous waste management inspection
  - well construction permit
  - water withdrawal permit
  - Pollution Prevention Challenge Grants

- Local Governments
  - technical assistance
  - NPDES permit
    - municipal wastewater discharge
    - municipal storm water discharge
    - non-discharge permit
      - land-application
      - on-site subsurface disposal
  - complex source air permit
  - solid waste management unit permit
    - landfill
    - municipal solid waste incinerator
    - transfer station
    - materials recovery facility
  - public drinking water
    - public water supply permit
    - well construction
  - water withdrawal registration

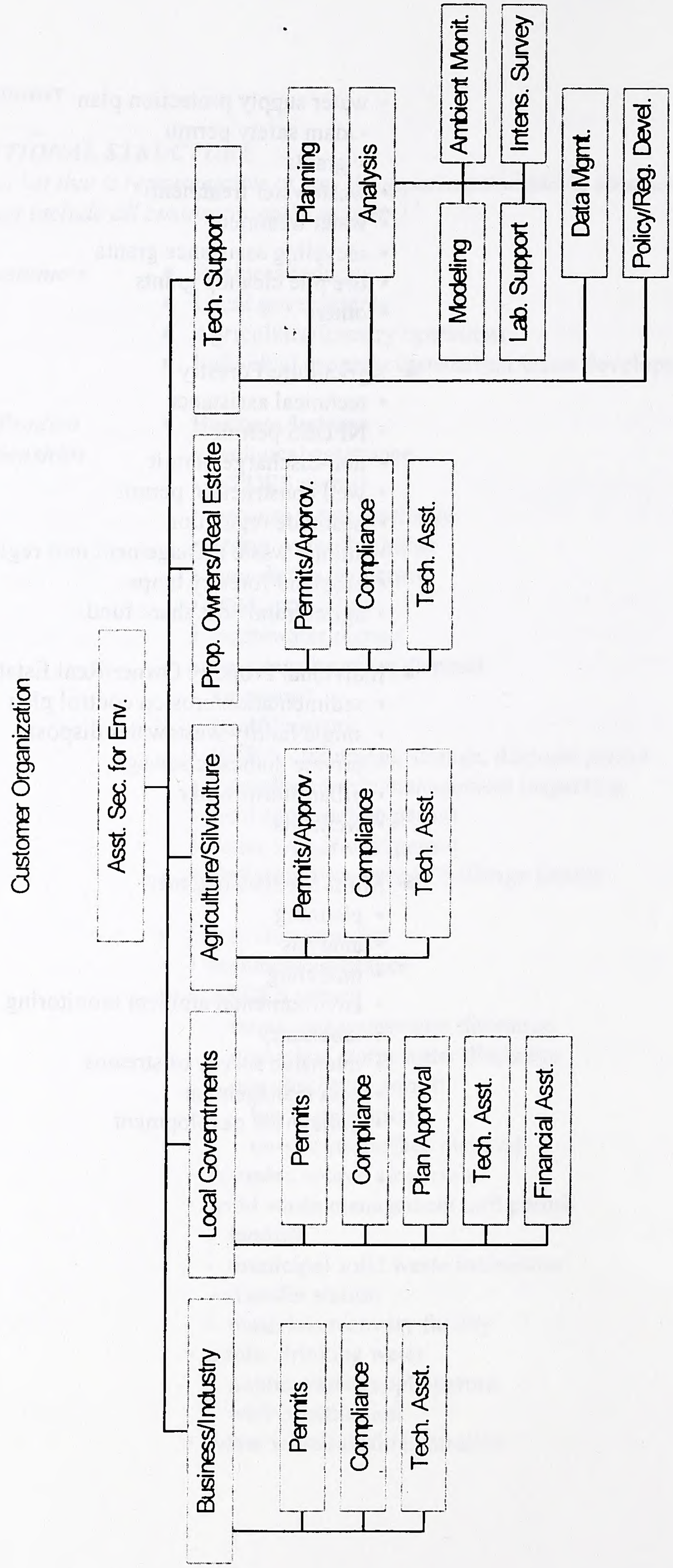
- water supply protection plan
    - dam safety permit
    - grants
- wastewater treatment
- water treatment
- recycling assistance grants
- tire pile cleanup grants
- others

- Agriculture/Forestry
    - technical assistance
    - NPDES permit
    - non-discharge permit
    - well construction permit
    - pesticide regulation
    - animal waste management unit registration/bmps
    - cropland/forestry bmps
    - agricultural cost share fund

- Individual Property Owner/Real Estate Development
    - sedimentation/erosion control plan
    - single family wastewater disposal
    - private domestic sewage
    - urban storm water
    - wetlands

- Multi-Media/Customer
    - planning
    - analysis
    - modeling
    - environmental ambient monitoring
    - laboratory
    - intensive survey of streams
    - data management
    - policy/rule development

Fig. II-6


Customer Organization
Asst. Sec. for Env.
Business/Industry
Permits
Compliance
Tech. Asst.
Local Governments
Permits
Compliance
Plan Approval
Tech. Asst.
Financial Asst.
Agriculture/Silviculture
Permits/Approv.
Compliance
Tech. Asst.
Prop. Owners/Real Estate
Permits/Approv.
Compliance
Tech. Asst.
Tech. Support
Planning
Analysis
Modeling
Ambient Monit.
Lab. Support
Intens. Survey
Data Mgmt.
Policy/Reg. Devel.

SCENARIO: Decentralized

Background

The work group began by taking a "bottoms up" approach to organization -- that is, to start at the field (regional) level and work backwards to the central (Raleigh) level. Second, the group decided to try organizing by function at the regional level on the premise that the central level would be organized by media.

The group assembled the model by sorting functions into two categories: those that could be performed best at the regional level and those that could be performed best at the central level. As sorting progressed, a third category quickly emerged -- functions that require both central and regional office involvement.

The basic approach has been to focus on the regional level and little effort has gone into developing the organization at the central level. Even at the regional level much refinement is needed to make this model a "finished" product.

A primary consideration is that DEHNR environmental programs are performed best when conducted at the local level or as near to the user or customer as possible. Hence, local problems are solved locally and local needs are served at the local level to the greatest extent possible.

The regional office would become the focal delivery point for serving environmental customers. The central office would conduct functions with statewide implications, manage special programs that cannot be administered effectively by the regional office, and support the field organization by providing administrative support, special expertise, oversight and coordination.

Principles

- Improve customer service.
- Shorten permit approval time.
- Provide the customer greater and more immediate access to technical assistance.
- Improve decision-making by basing decisions on knowledge of the local situation.

Assumptions

- The regional office will be staffed commensurate with the identified workload and the expertise needed in the region.

- The regional staff will be empowered with authority, training and information.
- The regional office will utilize process teams and cross-functional teams to match expertise with need, rather than duplicate expertise present elsewhere.
- The central office will be smaller and media-oriented.
- The central office will provide strong coordination to assure accountability and consistent application of rules and policies.

Description

The model presents a decentralized organizational approach. The regional office is the basic point of delivery for environmental services. The central office exists to conduct only those services with statewide implications that are inappropriate for regional implementation, and to provide support for the field organization. The regional office is function-oriented with process teams and cross-functional teams to facilitate media interaction. The central office is media-oriented so that the various media have advocacy at the division level.

The model focuses most clearly on providing more effective and customer-friendly service. Performance and efficiency should also be enhanced once the model is fully implemented.

Pros

- The model is customer friendly.
- Problem solving is moved closer to the problem.
- At the point of program delivery, which is the regional level, the function-oriented approach is a better diagnostic tool than the media-oriented approach for assessing programs strengths and weaknesses. The functional approach provides better flexibility to develop an organization that matches the workload.
- By retaining a media-oriented central office, the various media have advocacy at the division level.
- The ability to apply flexibility and problem-solving in enhanced by localized decision making.

Cons

- Increased decision making at the regional office level increases difficulty of maintaining consistency across the regions.

- Having a media-based central office and a functionally-based regional office may create difficulties in interaction, coordination and accountability.

Issues

- Should modeling activities be moved from the central to the regional office?
- Is it appropriate to centralize enforcement?
- Will locating professionals in regional offices lead to greater turnover of competent employees?

Change From Existing Organization

The changes would be profound for most existing divisions. Foremost would be the switch to the regional office as the focal delivery of services. Currently, no divisions are totally decentralized. Many more people would be located away from Raleigh and in a regional office. The degree of upheaval for employees and their families would depend on the speed of implementation. Organizing by media at the central level would result in fewer divisions and some job elimination, plus transfer of many employees to new divisions. Organizing by function at the regional level would be a major change for most divisions and would lead to rearranging many present programs. In sum, much of the present organization would not exist if this model were implemented.

EPAT Response

Some ideas in this scenario, especially for improving customer service, should be given further consideration. However, too little detail on organizational structure is provided to make this a complete and workable scenario. The EPAT favors the integration of some of these ideas with another scenario.

***SCENARIO:* Decentralized**

ORGANIZATIONAL STRUCTURE

(This is a conceptual list that is representative of how the department would be structured under this scenario. It does not include all functions currently performed by the central and regional offices.)

Functions Performed at Central Level	▪ Administrative support • Personnel • Budgeting • Legislative liaison
	▪ Policy, strategic planning, analysis
	▪ Resource planning/coordination*
	▪ Technical support/transfer to regional offices*
	▪ Data management/analysis/inventory*
	▪ Modeling support*
	▪ Training/certification* • Regional coordination/supervision • Laboratory support • Financial assistance coordination • Public information coordination
	▪ Environmental education* • Property management/acquisition • Regulatory commission coordination
	▪ Setting environmental standards*
	▪ Risk assessment*
	▪ Setting implementation standards to achieve
	▪ Consistency across regions

* *Responsibility resides at central office but requires regional input and/or assistance.*

Functions Performed at Regional Level

- Permitting
- Compliance inspections/enforcement
- Compliance and technical assistance
- Approval of corrective action plans
- Financial assistance
    - Outreach/technical assistance
    - Project management
- Public information contact
- Emergency response
- Data collection/monitoring
- Work teams summary

ISSUE-BASED SCENARIOS

EPAT wanted to make certain that the report and recommendations address the areas of potential improvement indicated from the customer and staff interviews, process studies, review of reference materials and other information, and from the EPAT members' personal knowledge and experience. This resulted in an extensive list of substantive issues. Nearly all the issues involve two or more environmental divisions, and sometimes other state, federal and local agencies with links to DEHNR's environmental divisions. Most issues are evident in one or more of the following general problem descriptions:

- Overlap or duplication of programs.

An overlap or duplication occurs when multiple divisions participate in the same or similar programs and/or program functions.

- Fragmentation of programs.

Fragmentation of program functions occurs when a division, section or branch implements only part of a program and a different division, section or branch implements the remaining parts.

- Poor coordination between divisions and/or organizational levels.

Poor coordination occurs when divisions and/or central and regional offices fail to communicate or work together properly on activities involving shared responsibility or interests. In practice the units tend to work independently rather than cooperatively.

- Unclear accountability/no lead agency.

This occurs when multiple divisions have responsibilities and/or interests in a program function or process, but where no division has the designated "lead" responsibility.

- Conflicting philosophies between divisions.

Conflicting philosophies between divisions occur when philosophical differences create roadblocks to effective working relationships.

- Conflicting standards between divisions.

Conflicting standards occur when one division sets a higher standard than another division for a comparable program activity or step in a process.

Most of the reviewed issues fall logically into one of these major groups: fragmentation and overlap of water and wastewater issues and activities, nonpoint source water quality protection, waste, central versus regional perspective and technical assistance. Air quality is dealt with separately since EPAT was able to give the agency only a limited review. Two issues overlap two of the major groups. Below is a listing of the issues by group:

- Fragmentation and Overlap of Water and Wastewater Issues and Activities
  - Public Water Supply and On-site Wastewater as Division of Environmental Health programs
  - Protection of drinking water wells
  - Water planning and analysis
  - Instream flow and stream classification
  - Land-based disposal of wastewater residuals
  - Groundwater remediation
  - How many agencies are necessary to most effectively and efficiently implement water use and water pollution control activities?

- Non-point Source Water Quality Protection
  - Non-point source program coordination
  - Wetlands management
  - Animal waste management
  - Use and role of soil scientists
  - Regulation of forestry NPS best management practices
  - Mining reclamation and water permits
  - Erosion and sediment control
  - Stormwater management, sediment control and coastal land use planning
  - Dam Safety

- Waste Management/Reduction
  - Mixed waste (radioactive and hazardous)

- Central versus Regional Perspective
  - Central/regional functions
  - Coordination of regional activities

- Technical Assistance
  - Compliance assistance and waste reduction technical assistance
  - Soil science technical support
- Air Quality Protection

Each group of issues is discussed in this section. Under each group, the specific issue is identified and described, followed by the possible scenarios for resolving the issue. These scenarios provide a menu of re-organization options, which could be implemented independently of one other.

For most issue groups, some overall recommendations are given. These recommendations are appropriate regardless of the specific issue and related scenarios. Some recommendations are non-structural in nature and can be applied regardless of the organizational structure.

Environmental Programs Not Thoroughly Reviewed

EPAT realized that it could not thoroughly review all the department's environmental regulatory programs. Programs with similar responsibilities received the most attention because EPAT believes that the coordination of these programs should be improved. The programs reviewed generally have a strong relationship to water or waste management. Other environmental programs, such as air quality and/or radiation protection, were given only cursory reviews. These programs are very specialized to their particular media and only have minimal interaction with other departmental environmental agencies.

However, this cursory review does ***not*** necessarily mean that the efficiency, effectiveness and customer service within these programs could not be improved. EPAT recommends that each division conduct its own internal review to discover ways to improve.

ISSUE: Water

Grand Issue: Fragmentation and Overlap of Water and Wastewater Responsibilities

An EPAT workgroup addressed certain issues in the various water-related programs throughout the department. Many of the program activities in the various divisions involve some aspect of water resource planning, use or protection. Many of the divisions participate in one or more of these programs, which can be interpreted as an overlap or fragmentation of program function and responsibility. This overlap or fragmentation affects program accountability and implementation and results in confusion among many of the department's customers.

Lack of comprehensive and coordinated water resource planning and analysis, and water and health protection exists as a result of overlapping and fragmented program functions between agencies: primarily the Division of Water Resource (DWR), the Division of Environmental Management (DEM) Water Quality Section (DEM-WQ), DEM Groundwater (DEM-GW), and the Division of Environmental Health - Public Water Supply Section (DEH-PWS) and On-site Wastewater Section (DEH-OSW). The following specific issues illustrate this point.

Issue 1: Public Water Supply and On-site Wastewater as Division of Environmental Health Programs

An important issue discussed by the group is the apparent "health" aspects of regulating drinking water conducted by DEH-PWS. This health connection is important to the public drinking water program and is currently supported by the Commission for Health Services. This connection is essential and must be a component of the drinking water program, regardless of how drinking water activities are organized in the department. This is in contrast to the health implications of environmental management decisions, which are often not given as much consideration as other implications.

The issue of fragmentation of land-based wastewater management between DEH-OSW, DEM-GW, and DEM-WQ was raised during internal and external interviews. More detail is included in the issue on Land-Based Disposal of Wastewater and Wastewater Residuals, which appears later in this section. As long as the On-site Wastewater program resides in the Division of Environmental Health, no potential for reorganization exists.

After long discussion, the committee concluded that the "tie to health" being discussed is the oversight of the Commission for Health Services over DEH Section activities. Since other environmental programs report to other commissions, the potential exists to move the location of the organization without severing the relationship to the Commission for Health Services. In the future, if commissions are combined or eliminated, the Environmental Management Commission (EMC) and the Commission for Health Services should be restructured to the EH(ealth)MC, incorporating both sufficient health and environmental representation. This combination might be an overall improvement for the above stated reasons of bringing health more into the environmental decisions. If the remaining health activities in DEH are moved out of EHNR into a separate department of health, consideration of moving environmental epidemiology to EHNR will be necessary.

Scenario

Move DEH-PWS and DEH-OSW from the health side to the environmental side of the department. Maintain the reporting relationship to the Commission for Health Services. The committee believes that these activities are closely linked with the other water programs in the department, but recognizes the importance of their connection to health. Merging these DEH sections with the environmental programs would strengthen the environmental tie to health by removing the divisional barrier that separates them.

Pros

- The tie between the health aspects of water to the water activities conducted in the rest of the department would be strengthened, resulting in a more comprehensive analysis of impacts of proposed activities.
- Provides the opportunity to include the Public Water Supply Section and the On-site Wastewater Section in organizational scenarios

Cons

- The drinking water program's tie to health may be weakened by having an agency director whose focus is split between environmental and health protection.
- Some programs, such as the regulation of wells and septic tanks, will not work without assistance from the local health agencies, particularly if there are unfunded mandates.

Issue 2: Protection of Drinking Water Wells

Wellhead protection program activities administered by DEM Groundwater focus on the protection of the groundwater as a public drinking water source by educating local governments and public water suppliers. These customers are assisted in identifying potential sources of groundwater pollution to public water supplies and instructed on how to manage these sources to provide a high level of protection and confidence in the drinking water supplied by wells. The construction of the public water supply wells and treatment of the raw water source are activities regulated by DEH. This may be viewed as a fragmentation of the public water supply program.

Associated with public water supply wells is the protection and use of private water supply wells. Currently, DEM-GW is responsible for all public and private well construction activities, with an emphasis on private wells. DEH-PWS, through the adoption of DEM's well construction standards, protects public water supply wells as a source of drinking water. Several local health departments have adopted their own well construction standards, and site and inspect all private wells being installed in their counties. The counties without local standards still site well locations for private homes and issue permits for the installation of subsurface treatment systems (i.e., septic tanks). Fragmentation results when one agency regulates public wells and another regulates private wells, because of the duplication of training, expertise, and purpose.

Wherever the water programs, and specifically the private well standards, are implemented in the department, there will be a need for close coordination between the state and local health departments. Because of the vast number of private wells installed daily throughout the state, no state agency has sufficient staff to monitor this activity. As with subsurface disposal systems for private homes, only the local health department staff is close enough to the situation to provide the necessary regulatory well construction assistance for the customer.

Scenario

Combine public water supply well siting and construction functions currently in DEH-PWS and the private well siting and construction standards currently in DEM-GW, along with the Wellhead Protection Program in DEM-GW into one agency.

Pros

- Eliminates duplication and the fragmented approach to regulation of private and public well construction between DEM and DEH.
- Wellhead protection and public water supply well construction and site evaluation activities would be located in one agency, enhancing protection of the drinking water well.
- Could increase the health emphasis in the well construction and wellhead protection programs.

- Could increase the emphasis on the private well siting and construction standards by improving internal coordination, and coordination with the local health departments.

- Less confusing to customer to know whom to contact for well construction activities.

Cons

- Regulation of private wells would not work without assistance from the local health agencies, particularly if there are unfunded mandates.

- May fragment well construction as a groundwater protection program by separating it from other groundwater protection activities.

- Possible regulatory over-emphasis on the non-regulatory functions. Without a distinct organizational identity, certain planning resources could be absorbed into program delivery.

Issue 3: Water Planning and Analysis

Water supply planning, water resource availability studies, and capacity use studies are conducted in DWR. These studies share common elements with basinwide management planning, wellhead protection, watershed protection, water resource availability studies, and capacity use studies conducted in DEM.

DEH-PWS focuses on the design and implementation of surface and groundwater public water supply projects for providing drinking water. Fragmentation results when water resource availability data that is generated by DWR or DEM is not used by, or readily available to, DEH. Water quality data and water use data generated by DEH may not be readily available to DWR and DEM for use in resource evaluation studies.

Scenario 1

Combine capacity use activities and water resource availability studies currently in DEM-GW with the capacity use, water use, and water resource availability study activities currently in DWR, into the water use planning agency.

Pros

- Eliminates current fragmentation of, and competition between, capacity use and water resource availability issues.

- Combines water use data gathering activities into one agency: water use permitting and registration.

- Combines capacity use studies and subsequent permitting in one agency.

Cons

- Information gathered by the water quality protection agency, such as potential groundwater contamination, would not be as available for capacity use activities.

Scenario 2a

Combine public and private water supply activities (currently in DEM and DEH) in the same division as water resource planning and management functions (currently in DWR). For drinking water issues, include related water resource planning activities with the regulatory aspects of approving water systems. Well construction regulation, wellhead and watershed protection currently in DEM would move to the drinking water program since their primary purpose is to maintain the integrity of sources of water supply. Wells associated with pollution monitoring would remain in the water quality protection agency as would basinwide management planning. Water planning, water use, water registrations and permitting, regional availability studies, capacity use activities, and water resource development activities associated with DWR would reside in the water use agency, including those currently residing in the DEM-GW section. The resource and quantity planning programs would maintain independent organizational identity within the agency. The main difference from the scenario 2b below is that here, the planning activities are left closer to the activities they support by not centralizing all planning.

Pros

- More comprehensive and coordinated water supply planning and implementation possible by combining the two phases of a single water development project within one agency.

- The potential for a customer to have to deal with multiple agencies when developing a water source or project is reduced.

- Greater potential for sharing and coordinating water use data and data collection allows for a more comprehensive database and less redundancy in reporting requirements by water systems.

- Closer ties between planning and implementation strengthen overall program delivery.

- Brings the water conservation planning mind set closer to the design and funding approval processes, encouraging efficient use of water resources.

- Eliminates duplication and the fragmented approach to the evaluation of water resource availability and capacity use studies in DWR and DEM-GW.

Cons

- Possible regulatory overemphasis over the non-regulatory functions. Without a distinct organizational identity, certain planning resources could be absorbed into program delivery, thereby causing the loss of valuable agency activity and customer service.

Scenario 2b Combine all water resource planning functions (e.g., water supply planning, wellhead protection, watershed protection, basinwide management, capacity use studies, and stream monitoring) in one agency. Water supply functions, including private and public well regulation, well construction, water treatment and distribution, and drinking water source classifications would reside in another agency. This may be at the division level.

Pros

- Customer may have fewer people to contact in fewer divisions or sections for a specific project.
- Improves coordination of data collection and allows for a more comprehensive database.
- Enhances the importance of comprehensive water and wastewater resource planning and analysis.
- Eliminates duplication and the fragmented approach to regulation of private and public well construction by two agencies.
- Eliminates duplication and the fragmented approach to the evaluation of water resource availability studies and capacity use implementation currently in two agencies.
- Locates wellhead protection and public water supply well construction and site evaluation activities in one agency, enhancing protection of the drinking water well.
- Better coordination at top levels of management is possible by consolidating functions under fewer managers.

Cons

- Goes against the concept that planning activities should have close ties to the program delivery aspect of the organization. Permitting, compliance/enforcement, and regional staff would not be active participants in the planning process or have responsibility for developing plans.

- May require customer to deal with more than one agency regarding water supply wells and pollution monitoring wells.
- Implementation may require statutory or regulatory changes and restructuring of funding.
- Could result in one agency being perceived as the "white hats" (water use agency) and the other as the "black hat" agency (water quality protection).
- Similar functions for water supply and wastewater would still be in separate divisions (e.g., review and permitting of facilities, operator training and certification, financial assistance programs would be located in each division). This necessitates similar training and expertise in different agencies.
- Without organizational identity, certain planning resources could be absorbed into program delivery, thereby causing the loss of valuable agency activity and customer service. While close coordination is necessary, separate identities are necessary too.
- The ability to develop a "one voice" program component for water quality protection or stream ecological program components is diminished by grouping related functions under different managers.

Issue 4: Instream Flow and Stream Classifications

Instream flow could reside in the water use or water quality protection agency. The goal of protecting aquatic habitat, as well as the necessary biological and ecological work and expertise, relates closely to the mission of the water pollution control agency. Low flow issues centered around how much water is recommended to be left in a stream could be resolved with one agency, still needing input from the Wildlife Resources Commission. However, instream flow activities have a direct impact on the availability of water for other purposes. It is also beneficial to have one agency responsible for the allocation of water between competing uses so that customers get less conflicting advice on how to resolve agency concerns. There was no consensus among the team on the most appropriate organizational entity to implement DWR's instream flow program.

The process for stream classifications currently resides in one agency, regardless of the purposes for which the water body is being classified. Some water classifications relate to drinking water (WSI-V, FWS) and others (ORW, HQW, B, C, Trout, URW) have water pollution control functions. The situation currently exists where DEH is supplying information to DEM for use in drinking water classifications, even though DEH is responsible for the quality of the drinking water source.

Scenario 1

Divide classification of water between those classifications that serve a water quality purpose and those that serve a drinking water purpose. Locate water classifications that relate to drinking water purposes within the water use agency. Place water pollution control classifications with the water quality protection agency. Classifications reside with the agency ultimately responsible for the designated purpose of that water.

Pros

- Locates the particular classification with the personnel with the best access to supporting data and knowledge of the situation, allowing the potential for improved classifications.

Cons

- Close coordination between the two agencies would be necessary for the overall water classification program to be effective.
- Fragments existing stream classification program. May result in a situation where one stream or customer needs classifications from both agencies.

Scenario 2

Move instream flow activities from DWR to the quality control agency.

Pros

- Locates instream flow analysis activities in an agency sharing a consistent mission of environmental protection.
- The ability to coordinate resolution of low flow issues for wastewater discharges and aquatic needs is enhanced. The recommendation of how much water is needed in the stream could be made by one agency.

Cons

- The direct link to comprehensive allocation of water between competing water uses, such as instream flow and public water supply, is lost by separating the consideration of public water supply needs from instream flow needs. The recommendation of how much water will ultimately be left in the stream for water quality and habitat reasons after balancing competing uses is no longer in one agency.
- Customer could be left to resolve competing agency issues.

Issue 5: Land-Based Disposal of Wastewater and Wastewater Residuals

There is no comprehensive and coordinated approach to the management of land-based wastewater and wastewater residuals (sludge) applied to the surface and subsurface of the land. Currently, DEM Water Quality (DEM-WQ) is primarily responsible for regulating the disposal and treatment of wastewater discharged to a water body or to the land surface and sludge applied to the land surface. DEM also issues the wastewater management permit for these sites.

The DEH-OSW deals with industrial, commercial and larger size on-site subsurface wastewater management systems and other special projects the local health department refers to the state. The permitting and inspections of septic tanks and subsurface disposal fields for private homes are done by the local health department, environmental health office, in each county. DEH provides technical assistance and training for the local health department employees carrying out this responsibility. In some cases, DEM is also asked for assistance in permitting special projects. This may include regional office and central office permitting staff. DEM-WQ retains the authority to regulate the subsurface disposal of wastewater sources associated with groundwater pollution cleanups.

The Division of Solid Waste Management (DSWM) is responsible for the land application of solid residuals from wastewater treatment processes (septage) for situations where the wastewater is disposed below the surface of the ground. Wastewater management systems for these sites are approved by either DEH or the local health department. In addition, DSWM also permits management of sewage that is pumped from portable toilets and grease pumped from restaurant grease traps by septage haulers.

Within DEM, many of the potential sources for groundwater impacts are indirectly regulated by this agency through permits issued by DEM-WQ. DEM-GW is consulted by DEM-WQ to evaluate the risk to groundwater relative to a particular disposal scenario, by reviewing information submitted to DEM-WQ by a permit applicant. This results in a fragmented approach to management of the waste. The customer often does not understand why the DEM-WQ is issuing permits for wastes that may more directly impact groundwater resources.

Sludge and septage are similar by nature, often exactly the same. Both are often disposed of by application to the surface of permitted sites or injected below the soil surface. Septage is often accepted by public owned treatment works (POTWs) and ultimately managed as sludge along with that produced by the POTW itself.

Many of these sources of waste pose a risk to the groundwater resource, yet the agency primarily responsible for protecting the groundwater (DEM-GW) has no direct regulatory authority over many of these sources or the issuance of many permits. Groundwater monitoring information collected by DEH and DSWM is not readily available to the DEM-GW.

New Clean Water Act regulations affecting the management of wastewater treatment residuals covers both sludge and septage with similar stabilization, testing, and management requirements for both. The state must develop a state implementation plan (SIP) to receive authority to administer the residuals management program. There was not consensus among the team that the DSWM Composting and Land Application's septage program should be combined with sludge in a water pollution control agency.

Scenario 1

Combine On-Site Wastewater from DEH, DSWM Composting and Land Application, and DEM land-based wastewater and wastewater residuals management functions in a water quality protection division. The proposed water quality protection organizational structure would handle some activities now residing in DSWM, DEM, DEH. Combine land-based discharge and disposal of wastewater, sludge, and septage within this organizational structure. When one customer is dealing with one waste stream, such as a campground, the same division would be responsible for all disposal scenarios for that facility.

The local health department would still permit individual small subsurface systems. Very strong ties with defined coordination between the state and local health departments must remain. This would include technical assistance and training from the state. This also will necessitate a strong direct link between the environment and health sides of the department concerning policy development.

Pros

- Improves coordination of data collection and allows for a more comprehensive database.
- Wastewater and wastewater residuals disposal fragmentation issues are reduced by combining functions associated with these agencies.

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- Customers for wastewater and residuals disposal have only one contact.

- Similar wastes (sludge and septage) are handled by the same agency, enhancing consistency.

- Similar treatment and disposal practices (surface and subsurface) are handled by the same agency, enhancing consistency and coordination.

- Any monitoring requirements for surface or groundwater could be determined by fewer agencies, resulting in better consistency and coordination.

- Better coordination at top levels of management by consolidating functions under fewer managers.

Cons

- Creates a large water quality protection agency with the potential for internal management problems and a larger bureaucracy. Creates a major reassignment of divisional responsibilities.

- Moving DSWM septage activities may possibly break something that is working fine. The move is suggested only because of the similarity between sludge and septage. In fact some customers resist the mention of a move. The move is from DSWM to the water quality protection agency because of the relative size of the programs and the links to wastewater. In theory, sludge management activities could be moved to the waste management division, joining septage as a waste management issue.

Scenario 2 Combine groundwater protection functions, including groundwater remediation and the underground storage tank program, with the agency created under Scenario 1 above.

Pros

- All groundwater pollution prevention planning and management activities would be in one agency, allowing for close coordination between issues and for customer consistency.

- Wastewater management fragmentation issues are reduced by combining functions associated with the disposal of wastewater from groundwater remediation projects with approval of these systems.

- Any monitoring requirements for surface or groundwater would be determined by one agency, resulting in greater consistency.

Cons

- Creates a large water quality protection agency with the potential for internal management problems and a larger bureaucracy. Creates a major reassignment of divisional responsibilities.

Issue 6: Groundwater Remediation

There is a lack of clearly defined or understood responsibilities between DEM and DSWM regarding groundwater remediation. Groundwater remediation has a water pollution control aspect and a solid waste/hazardous waste aspect. Today these functions are separated. DEM-GW has the overall responsibility for protecting the groundwater from all pollution sources. DSWM has responsibility for ensuring the cleanup of groundwater from only certain specific sources such as those regulated under the Hazardous Waste and Superfund programs, as well as permitted landfills.

It appears that the confusion can be traced directly to lack of training of DEM-GW and DSWM staff on how to determine whether a given waste or substance is subject to RCRA or CERCLA (these are federal programs) purview, and lack of clear directions to DEM and DSWM staff on each program's scope and responsibilities. Confusion about whether DEM-GW or DSWM (RCRA or CERCLA) has jurisdiction over cases involving groundwater remediation of a hazardous waste or substance has created unnecessary delays in remediation and financial hardship to parties seeking clean-up. It has also been suggested that DEM involvement in those cases that are within DSWM jurisdiction creates an avoidable delay in the process of approving a clean-up plan, and places an unnecessary strain on DEM resources.

Scenario

The group discussed both structural and nonstructural approaches to the problem of jurisdictional confusion, and concluded that a nonstructural solution is more feasible. The structure would remain essentially as it is with stronger coordination and better definition of responsibility. While there could be a structural reassignment to one agency for this function, there are many difficult funding and management questions about such a move.

Reorganizing around groundwater remediation would fragment the RCRA and CERCLA programs and does not appear to yield an improvement over the current situation. The ties within RCRA and CERCLA appear to share a more common knowledge of technology and regulation than with the groundwater agency. Since only a small percentage of groundwater remediation cases require RCRA or CERCLA involvement, reorganizing on this basis does not seem practical.

The group recommends that the agencies responsible for groundwater remediation undertake cooperative cross-training that would include clear delineation of program responsibilities, and that all staff are made familiar with and operate under a mutually agreed upon memorandum of understanding that outlines the tasks of each agency, and the criteria for determining when a given agency's purview is triggered.

Further, the group determined that the lead agency for any given clean-up would be responsible for ensuring that its approved plan complies with all applicable regulations. For example, instead of requesting that the groundwater agency review a corrective action plan, the state's RCRA and CERCLA programs staff would be familiar with the applicable state standards, conduct the review, and provide that assurance themselves. The purpose currently served by inter-agency routing of every site plan could be satisfied if these agencies develop a mechanism for a periodic audit of plans.

Pros

- Would not fragment the multi-media approach to hazardous waste currently administered by the DSWM.
- Would be less difficult due to significant body of federal regulations that would need to be accommodated.
- Both time and resources could be saved by reducing redundant reviews without sacrificing the enforcement of applicable standards.

Cons

- Customer still may not know which agency to report to in every situation.
- Groundwater cleanups still fragmented between agencies.

Issue 7: How many agencies are necessary to most effectively and efficiently implement water use and water quality protection activities?

The above issue discussions and scenarios generally converge on the creation of a water use agency and a water quality protection agency. Assuming implementation of some of these scenarios, the remaining question is whether these agencies fall within one division in the department or two divisions. No group consensus was reached on whether it would be more beneficial if these two structures are within one division or two. Issues associated with each scenario are shown below. (See Figs. III-1, III-2.)

Scenario Create two organizational structures to handle water: a water quality protection agency and a water use agency, as discussed in detail above. The main division of functions would be regarding whether the purpose of the activity is to preserve water quality and provide general environmental protection or to provide for the availability of water as a resource to be used.

- One water division.
    - Better coordination at top levels of management is possible by consolidating functions under fewer managers.
    - Total accountability for water may increase by having one manager with authority to implement all programs having a water use or protection focus within the department.
    - Creates a large water agency with the potential for internal management problems and a larger bureaucracy.
    - Creates a major reassignment of divisional responsibilities.
- Two water divisions.
    - Increases emphasis on each of the main program components of water use and water pollution control by giving each a representative at the division level.
    - Recognizes the differences in approach and mission between the two water management agencies.
    - Allows for a complete hearing and balancing of alternatives. Differences can still be resolved and a unified recommendation reached, but public discussion on the balancing of issues that occurs when making decisions will be enhanced. This would lead to increased understanding of departmental activities by our customers.
    - Close coordination between the two agencies would be necessary for the overall water program to be effective.
    - Could result in one agency being perceived as the "white hats" (water use agency) and the other as the "black hat" agency (water quality protection).

- Similar functions for water supply and wastewater would still be in separate divisions (e.g., review and permitting of facilities, operator training and certification, financial assistance programs would be located in each division). This necessitates similar training and expertise in different agencies.

- The ability to develop a "one voice" program component for water programs is diminished by grouping functions under different managers.

General Recommendations

The scenarios above can be combined into different organizations. These recommendations show the preferred scenarios from EPAT discussions.

1) Move DEH-PWS and DEH-OSW from the health side to the environmental side of the department. Maintain the reporting relationship to the Commission for Health Services.

2) Create one agency for water use and one for water quality protection. There was no consensus as to whether this should be in one division or two.

3) The water use agency would include functions related to general water resources and for drinking water. The drinking water arm would include functions related to: DEH-PWS; public water supply well siting and construction functions currently in DEH-PWS and the private well siting and construction standards currently in DEM-GW; the Wellhead Protection Program in DEM-GW; stream classifications of water that relate to drinking water purposes; and watershed protection currently in DEM. The water resources arm would include functions related to: capacity use activities and water resource availability studies currently in DEM-GW merged with the capacity use, water use, and water resource availability study activities currently in DWR; and other DWR activities. The resource and quantity planning programs would maintain independent organizational identity within the new division.

4) The water quality protection agency would include functions related to water quality activities, including: combined On-Site Wastewater from DEH and DEM land-based wastewater and wastewater residuals management functions; monitoring

of wells associated with pollution monitoring; basinwide management planning; water pollution control stream classifications; combined groundwater protection functions, including groundwater remediation and the underground storage tank program; groundwater remediation of non-RCRA or CERCLA sites; and other current DEM-WQ activities.

5) Groundwater remediation for RCRA and CERCLA sites would remain with those programs. All agencies involved in groundwater remediation should undertake cooperative cross-training that would include clear delineation of program responsibilities, and make staff familiar with and operate under a mutually agreed upon memorandum of understanding that outline the tasks of each agency, and the criteria for determining when a given agency's purview is triggered. The lead agency for any given clean-up would be responsible for ensuring that its approved plan complies with all applicable regulations.

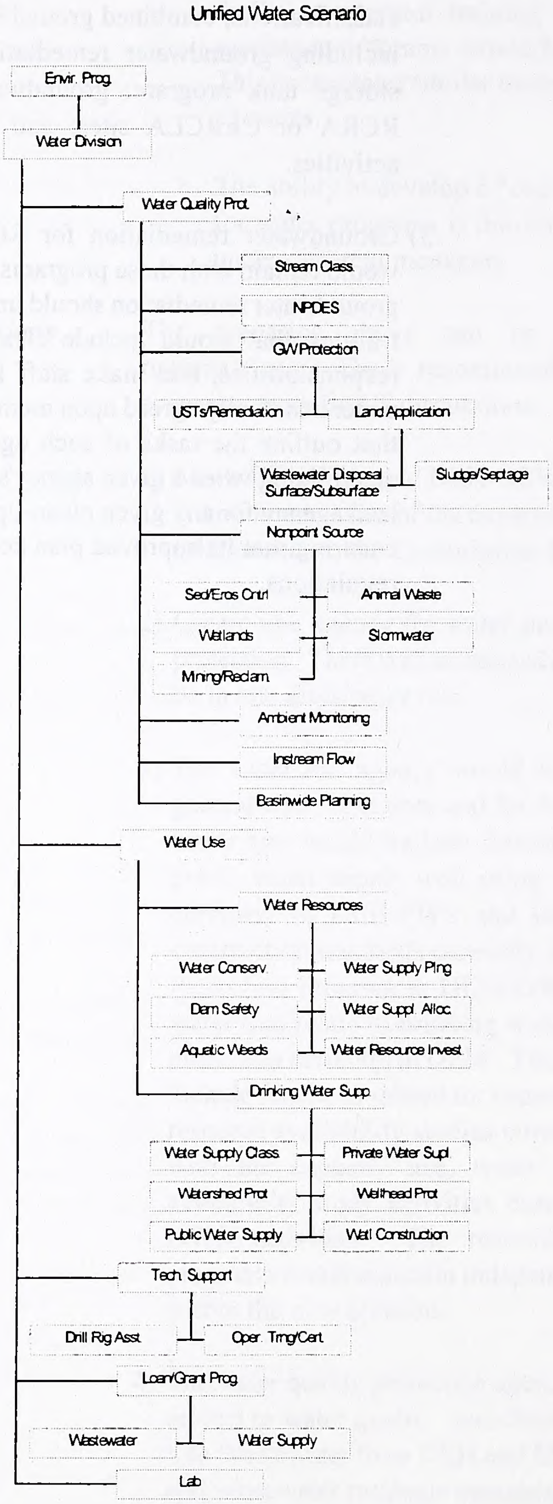
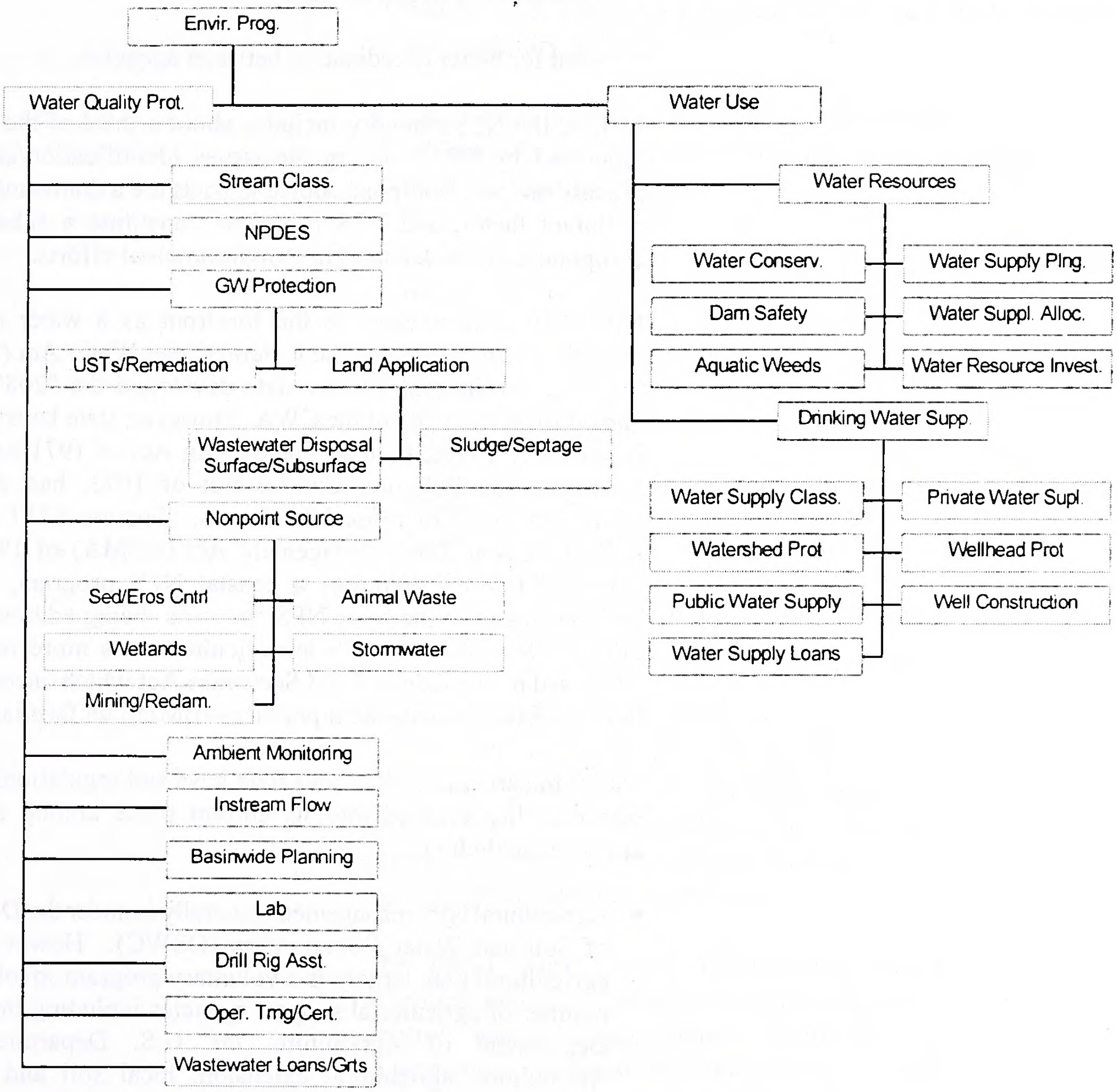

Unified Water Scenario

Fig. III-2

Divided Water Scenario



***ISSUE:* Non-point Source Water Quality Protection**

Grand Issue

EPAT identified several areas of concern among the agencies that have non-point source (NPS) pollution management responsibilities. These concerns are:

- Fragmentation and overlap in responsibility.
- Inconsistency in application.
- Need for better coordination between agencies.

In fact, the NPS category includes about a third of the issues identified by EPAT during the issues identification/analysis process review. Non-point source impacts are a dominant water pollutant factor, and NPS programs constitute a substantial component of the department's environmental efforts.

NPS management came to the forefront as a water quality objective with passage of the Federal Clean Water Act (CWA) in 1972. In the mid-70s the state developed the "208" plan, named for section 208 of the CWA. However, state laws passed in the early 1970s, such as The Mining Act of 1971 and The Sedimentation Pollution Control Act of 1973, had already addressed many of those NPS issues. Section 6217 of the federal Coastal Zone Management Act (CZMA) of 1972, as amended (1990), requires a coastal NPS program, which includes many of the same NPS concerns being addressed by other NPS agencies. NPS in agriculture was more recently addressed by the federal Food Securities Act which encourages the use of best management practices (BMPs) on farmland.

Out of the array of federal and state laws and regulations, NPS responsibility evolved into its current place among several agencies, including:

- Agricultural NPS management generally is under the Division of Soil and Water Conservation (DSWC). However, the agricultural plan largely is a voluntary program involving a number of agricultural support agencies including the N.C. Department of Agriculture, the U.S. Department of Agriculture, agricultural extension, local soil and water conservation districts, and several independent farm groups. Pesticides NPS management generally falls to the N.C. Department of Agriculture-Pesticides Section. Spills and direct water quality impacts from release of pesticides involve the Water Quality Program of DEM.

- Management of construction and mining NPS impacts is assigned to the Land Quality Section currently in the Division of Land Resources (DLR).

- NPS management measures protecting estuaries is assigned to the Division of Coastal Management.

- Stormwater management for certain protected high quality waters and estuaries program under the CWA is the responsibility of DEM.

- The monitoring of forestry BMPs is assigned to the Division of Forest Resources (DFR), while the regulatory aspects are the responsibility of DLR.

- Land application of wastewater and sludge is the responsibility of DEM.

- Wetlands mapping is conducted by both DCM and DSWC, whereas water quality protection related to wetlands is delegated to DEM.

- Coastal NPS concerns related to agriculture, forestry, urban development, marinas, hydro-modifications, wetlands and riparian areas is handled by DCM. (Note that current federal CZMA re-authorization may eliminate funding for this program.)

Federal regulations establish the state's water quality agency as the overall management agency for NPS coordination. However, problems of NPS program fragmentation, inconsistency and coordination occur because of different priorities, funding levels and enforcement philosophies of the agencies with NPS responsibilities.

The EPAT work process analysis reviewed several NPS activities including: mine permitting, erosion and sediment control, wetlands management, animal waste, stormwater management in coastal areas and high quality waters, NPDES general permits for construction and mining, and forestry BMPs. The five divisions in the department involved in these NPS programs or activities are Land Resources, Soil and Water Conservation, Coastal Management, Environmental Management, and Forest Resources.

The NPS aspects of water quality management receive a tremendous amount of support both from traditional groups and state/local environmental interest groups. However, the placement of constraints on land use activities has generated landowner and developer concerns and tremendous political interest and controversy over how, and whether, government should regulate private lands. Clear communication of NPS policy and requirements has become absolutely essential to promote customer comfort with NPS management.

Issue 1: Non-point Source Program Coordination

The overarching issue of non-point source pollution control management is where in the organizational structure should coordination, direction and implementation be placed. Two basic issues arise from this question:

- Should NPS activities be consolidated into one organizational division to maximize the potential for better coordination and cooperation, or should the activities be dispersed among several agencies, much as they are now but with non-structural changes to increase productivity and function?

- If consolidated, should NPS activities be placed in a water or land management agency? Strong conceptual reasons exist for either of these approaches. If water quality protection and improvement is the "driving" objective of NPS management, then land management is the mechanism for accomplishing that objective.

Scenario A

Consolidate program coordination within a water division. (See Fig. III-3.)

Pros

- The justification and push for better NPS management clearly comes from public concerns about water quality.

- Authority for controlling NPS water pollution is placed in the program that is accountable for protecting overall water quality.

- NPS is placed with other water pollution control activities for better overall planning and more integrated program development.

- Only one agency has to coordinate with EPA on CWA issues.

- Wetlands management can function consistent with existing federal regulations (water quality certifications from the water quality agency "state director").

- NPS coordination is organizationally closer to the water quality assessment resources for monitoring and study capability.

Cons

- The DSWC, DCM, DEM, the mining program and the sediment control program currently answer by statute to different commissions. Different priorities and policies would have to be resolved among the commissions, or the statutes would have to be amended for NPS functions to report to one commission.
- Strong coordination with DFR and outside agricultural agencies by the water division is still required.
- Program development/description remains separate from implementation arms of NPS management.
- The alternative structural distribution that merges water quality with land quality would result in extensive implementation considerations.
- Rules would have to be changed to transfer authority from existing agencies to the new agency.

Possible alternatives within this consolidated NPS water management option are:

- NPS activities currently within DEM are consolidated with mining, sediment control and DCM's NPS activities. Soil and Water Conservation functions remain separate because they are largely voluntary and not regulatory.
- NPS activities within DEM are consolidated, but DLR, DSWC and DCM's NPS activities remain within their current respective programs.

Scenario B

Consolidate NPS program coordination and management into a land management division. (See Fig. III-4.)

Pros

- Provides potentially for better coordination and consistency among NPS land management agencies.
- Wetlands resource/information agencies are consolidated with the wetlands regulatory agency.
- Similar technical review/inspection resources for storm water programs are consolidated.

- NPS management is placed where most NPS problem-solving expertise and disciplines reside. Much of the department's NPS land BMP knowledge is unified in one organization.

- NPS management rests with agencies that have traditional and routine ties with the customer. The potential for efficiency of operations and improved customer service is enhanced.

Cons

- The department's coordination with EPA on water quality issues could become difficult if responsibility for federal water quality mandates is delegated to more than one agency.

- Rules would have to be changed to transfer authority from existing agencies to the new agency.

- By statute, the DSWC, DCM, DEM, the mining program and the sediment control program currently answer to different commissions. Different priorities and policies would have to be resolved among the commissions, or the statutes amended for NPS to report to one commission.

- Inspection/review resources for many programs transferred to land under this option are currently assigned to water quality staff with multiple water program responsibilities.

- The assignment of regulatory duties to local soil and water district employees would be a change from their traditional voluntary approach. Local districts may be reluctant to implement enforcement.

- Overall water quality assessment activities are separated from NPS agencies.

- Comprehensive water quality planning could be more difficult because it would involve close coordination with another division.

Scenario C Leave NPS program coordination structure in the department essentially unchanged, but strengthen its function through non-structural changes.

Pros

- The regulated NPS land management customers remain buffered by their traditional BMP agencies from new mandates by water quality planning and goal setting. This is especially the case for relatively new regulatory programs in the agricultural and forestry NPS programs.

- Enforcement of many NPS programs would remain with water quality agencies and away from agencies traditionally considered non-regulatory and oriented toward technical assistance.

- Established customers would continue to deal with the same agencies for NPS issues.

Cons

- Without organizational change, the public perception could be that the department has not addressed this issue.

- Improvement to the NPS programs must be made by negotiated memorandums of agreement or other non-structural solutions that divisions develop mutually.

- Care must be taken to ensure that internal solutions don't hinder incentives to rethink how the current system could be improved.

- Continuing to maintain "buffering" by land management agencies could result in inefficiency and promote the view of "white hat" (non-regulatory) and "black hat" (regulatory) divisions.

Issue 2: Wetlands Management

The main issue of wetlands is whether the efforts of DEHNR divisions and other outside agencies having functions and interests in wetlands are coordinated and whether the agencies avoid overlaps in responsibilities. The wetlands management regulatory program was created as a result of the Clean Water Act (CWA) and involves several agencies with regulatory duties and several more with resource/information interests.

The actual permit to fill wetlands (Section 404 permit) is issued by the US Army Corps of Engineers. As a condition of the "404" permit, the state water quality agency must certify, by issuing a Section "401" permit, that the filling of particular wetlands will not have long-term, unacceptable water quality impacts.

While wetlands are considered waters of the state, and are protected as such, much of the effort to manage and protect them resides with the NPS land management agencies that regulate agricultural, mining and construction activities. Federal and state resource management agencies, such as the Wildlife Resources Commission, US Fish and Wildlife, Division of Coastal Management, Soil and Water Conservation Service, Marine Fisheries, and several other state and federal agencies have vital interests in the wetlands program.

Scenario

This issue is addressed by consolidation of departmental agencies having NPS and wetlands responsibilities into one agency or through non-structural improvements as described in the three scenarios under ISSUE 1.

Issue 3: Animal Waste Management

The concern for animal waste management is that DEM has the regulatory responsibility and administrative framework for water quality protection from animal waste, but animal waste planning and implementation has been placed in DSWC and other agricultural support agencies. Additionally, the permitting and stability-related inspections of the waste lagoon dikes rests with DLR.

Scenario

The three scenarios given for Issue 1 with the accompanying pros and cons for each one would also apply to animal waste. The purpose of consolidation would be to bring a technical assistance approach to the regulatory program and to use those advisory agencies that already have a high level of credibility with the farming community. The issue, though, revolves around whether both functions should be integrated under a single division to provide better coordination.

Issue 4: Use and Role of Soil Scientists

The issue is whether divisions with NPS responsibilities that need expertise in soil science should employ their own scientists or whether it is more efficient and effective to house all soil scientists within one agency.

Originally, DSWC housed all soil scientists and was committed to a memorandum of agreement with the USDA-Natural Resources Conservation Service (NRCS) and local soil and water conservation districts to accelerate the soil survey program. As initial soil surveys have been completed, the focus has shifted to providing soil interpretation assistance to many agencies - local, state and federal. In the last few years, DEH has hired soil scientists specifically to be available to local governments for on-site wastewater disposal technical assistance. DEM has also hired soil scientists to address issues of surface disposal of wastewater, and has expressed the need for more soil scientists in some regions. DSWC has three regional soil scientists to meet these needs. As project soil surveys are completed, more of these personnel will be made available to assist other agencies.

Scenario A Move the Division of Soil and Water Conservation from the natural resources side of department to the environmental side.

Pros

- Soil scientists are placed closer to environmental programs in divisions that need the expertise for soil interpretative work. This provides the potential for better resource coordination with the regulatory programs needing soil science support.
- Technical assistance is incorporated with the regulatory functions within a single division.

Cons

- The possibility is increased that the soil scientists would not be as available to other agencies and customers that have traditionally cooperated with DSWC (e.g., USDA-NRCS, Agricultural Extension Service, farmers, local government, etc.)

Scenario B Move the Division of Soil and Water to the environmental side of the department and assign the soil interpretative resources to water pollution control activities.

Pros

- Flexibility in scheduling for the use of soil scientists in water pollution control work is maximized.
- Need for water quality agency to hire soil scientists is eliminated, which prevents future duplication of effort.
- Technical assistance is not incorporated with the regulatory functions within a single division.

Cons

- Reorganization could disrupt soil interpretative services already committed to other agency support.

Flexibility in scheduling for the use of soil scientists in other activities is reduced.

Scenario C The Division of Soil and Water Conservation remains intact in the natural resources side, but coordination of soil interpretative services with other agencies is improved through non-structural methods, such as memorandum of agreements.

Pros

- This option leaves traditional interaction in place: coordination of agricultural cost sharing, PL 566 and soil and water district supervisor concerns with local districts, the Soil and Water Conservation Commission and other conservation partners.

- Non-structural changes could identify and address needs of environmental agencies, yet maintain long-standing services to other agencies.

- A buffer is maintained for the customer between technical assistance and regulation.

Con

- Technical assistance is separated from regulatory functions within the department.

Issue 5: Regulation of Forestry NPS Best Management Practices

The question is which agency should enforce forestry activity non-point source pollution control. Except for spills of potentially toxic or hazardous materials, non-point source pollution control for forestry is accomplished through the use of BMPs that are designed to prevent or minimize erosion and off-site sedimentation.

The amended Sedimentation Pollution Control Law of 1973 exempts forestry activities from having to receive approval of a sediment and erosion control plan, provided that BMPs are properly in place and maintained. However, if the Division of Forest Resources (DFR), in monitoring a forestry activity, finds that BMPs are not in place or are not functioning properly, it can refer the violator to the Division of Land Resources (DLR) for regulatory action. At issue is whether the monitoring and regulation should continue as currently done or whether both functions should be administered by either DLR or DFR.

Scenario A

Continue as presently organized.

Pros

- The scope and frequency of problems are small and the present arrangement functions reasonably well.

- This option requires no change in legislation or responsibilities.

- DFR can continue to provide technical assistance to customers without adopting a full enforcement program.

Cons

- Some inefficiency and delay occurs because enforcement is transferred to another agency.

- Customer undergoing enforcement has to switch agencies.

Scenario B

The Division of Forest Resources would perform both non-regulatory and regulatory functions.

Pros

- Regulated party is probably already a customer of Forest Resources so efficiency of effort and response time would be improved.
- Land Resources already has heavy construction NPS workload and is stretched to conduct the regulatory function.

Cons

- Adding another agency to NPS enforcement would further disperse NPS regulatory functions rather than consolidate them, and would require more coordination to assure consistent NPS regulation and accountability.
- Would require rewrite of legislation/rules to delegate to another agency.
- Without additional funding/personnel, DFR would be stretched to totally adopt this program.

Scenario C

A construction NPS agency would adopt the entire forestry NPS program.

Pros

- Total accountability and consistency should be improved by one agency handling the sediment control program for both land disturbing activities.
- Expertise and technology for forestry NPS BMPs are similar to construction NPS.

Cons

- Inefficiency would result by not using DFR personnel who are already trained in NPS BMPs, and who are already visiting sites for other forest management purposes.
- DLR would be further stretched to completely adopt this program.

Issue 6:
Mining Reclamation
Water Quality Permits

The issue with mining is overlap in responsibility and fragmentation of non-point source (NPS) pollution control *and* through the mine permitting and the water quality permitting programs. The need for a coordinated permitting approach has been recognized by the mine operators, regulatory agencies, environmental groups and the general public.

The mine permitting enabling statute, The Mining Act of 1971, requires that mines meet water quality requirements. Mining permits are typically conditioned with NPS and wastewater discharge controls. The Water Quality Section of DEM issues a mining NPDES for NPS and for mine dewatering, which usually requires controls already addressed in the mining permit. This represents a repetitive step for the mine operator.

Offsite sedimentation is the primary NPS pollution at mines in North Carolina. Because the control of erosion and sedimentation at mines is similar to such measures at construction sites, and because both activities are currently approved by the DLR, many of the comments made about the erosion and sediment control program (Issue 7) area apply to mining situations.

Scenario A

Use non-structural measures to simplify other related permit activities and let the mine permitting program be responsible for coordinating other environmental permitting for mines.

Pros

- This option should not be disruptive because much of this recommendation has already been accomplished.
- Designation of a lead agency should improve accountability.

Cons

- Closer coordination between the mining and water agencies will have to be implemented to improve customer service and increase effectiveness.
- Total accountability for water quality concerns at mining operations would remain dispersed between two agencies.

Scenario B

Combine general permitting of NPDES for mine dewatering and NPS with mine permitting program and delegate mining program to issue general NPDES mining permits.

Pros

- Customer deals with one agency .
- Comprehensive review of NPS issues at the mine is facilitated.

Cons

- Coordination with EPA could be more complicated because different agencies would be handling EPA programs.
- The mining program would be responsible to both the Mining Commission and the Environmental Management Commission for essentially the same activity.

Issue 7: Erosion and Sediment Control

The issue with the erosion and sediment control program is whether this program should be placed within a land management or water management agency. The general approach to mitigate water pollution from construction sites using erosion and sediment control devices is significantly different than using point source pollution water treatment to obtain a certain water quality.

Practical erosion control practices must be developed for a regulated site and a plan approval issued before construction can proceed. These requirements are more restrictive for designated High Quality Waters (HQW). Because sediment control measures are designed to accommodate the size of the disturbance, the design rain storm and sediment particle size, these actual onsite factors, plus installation and maintenance of the control measures, determine the effectiveness at a particular site.

Unlike a point source wastewater treatment plant, sediment and erosion control facilities do not have specific water quality limits on the chemical and physical characteristics of the water leaving a site. If the approved erosion control plan contains approved BMPs and the measures are properly installed and maintained, the site is considered in compliance with the established NPS management program for construction. This determination does not necessarily mean that runoff from a construction site with approved BMPs is free of water quality impacts. Colloidal clay particles are almost impossible to trap with conventional sediment control measures. The discharge of these particles can result in elevated stream turbidity levels and negative ecological impacts.

Scenario

The two scenarios for NPS consolidation or the scenario for non-structural improvements listed under Issue 1 would also apply to erosion and sediment control concerns.

Issue 8: Stormwater Management, Sediment Control and Coastal Land Use Planning

The primary concern with this issue is fragmentation and overlap of related responsibilities among the three divisions that handle stormwater management, sediment control and coastal land use planning.

The purpose of the coastal storm water and stormwater programs for other High Quality Waters (HQW) statewide is to control density impacts of development. If necessary, the storm water programs require the installation and maintenance of runoff control management practices that will essentially produce acceptable runoff quality. Land use management plans for coastal counties and other local governments may also require stormwater management.

These management practices are often the same measures as used for sediment control during construction. Therefore NPS efforts currently within DLR, DEM and DCM need strong coordination to prevent fragmentation and overlap of regulation.

Scenario Consolidate NPS responsibilities into one agency or implement non-structural changes described in the three scenarios under Issue 1 to address this issue.

Issue 9: Dam Safety The dam safety program is considered in the NPS section of this report because of the program's long-standing ties with DLR, which handles non-point source pollution control for mining operations and construction activities. Because many dams impound water supplies and are responsible for minimum stream flow releases at certain locations, the program also has a relationship with the water resources program. The issue is whether dam safety should be placed in a land management or water resources agency.

Regional office personnel in DLR are cross-trained in mining, sediment control and dam safety programs, and can typically inspect mines, construction and dams during the same field trip. By using personnel in other programs to combine field trips, more annual inspections of the state's 4500+ dams are possible than could be accomplished using only the man-years delegated to dam safety. This cross training of other personnel in dam safety also allows the dam safety program the flexibility to mobilize a larger pool of trained dam inspectors across the state for dam emergency situations.

The technology and expertise in dam safety plan review and inspection require both water resources hydrologic/hydraulic and land resources geotechnical and erosion control engineering.

Scenario A Place dam safety in a combined NPS land agency.

Pros

- This would cause less disruption because the program is already in a land management agency.
- Mine reclamation and sediment control regional office personnel are already crossed-trained to inspect/evaluate dam safety.

- Technology/expertise for stormwater, erosion and sediment control for mines and construction is similar.

Construction of new dams and the clearing of reservoir areas require sediment control inspections as well as dam safety inspections, thus providing the opportunity for combined inspections.

Cons

- Some hydrology/hydraulic expertise would overlap in dam safety and water resources agencies.
- Cooperation with the water resources agency would be essential in areas of water supply planning and minimum streamflow release.

Scenario B Move dam safety to water resources agency.

Pros

- Hydrologic data/expertise could be more easily shared within the same agency.
- Close coordination on water supply/minimum streamflow would be facilitated.

Cons

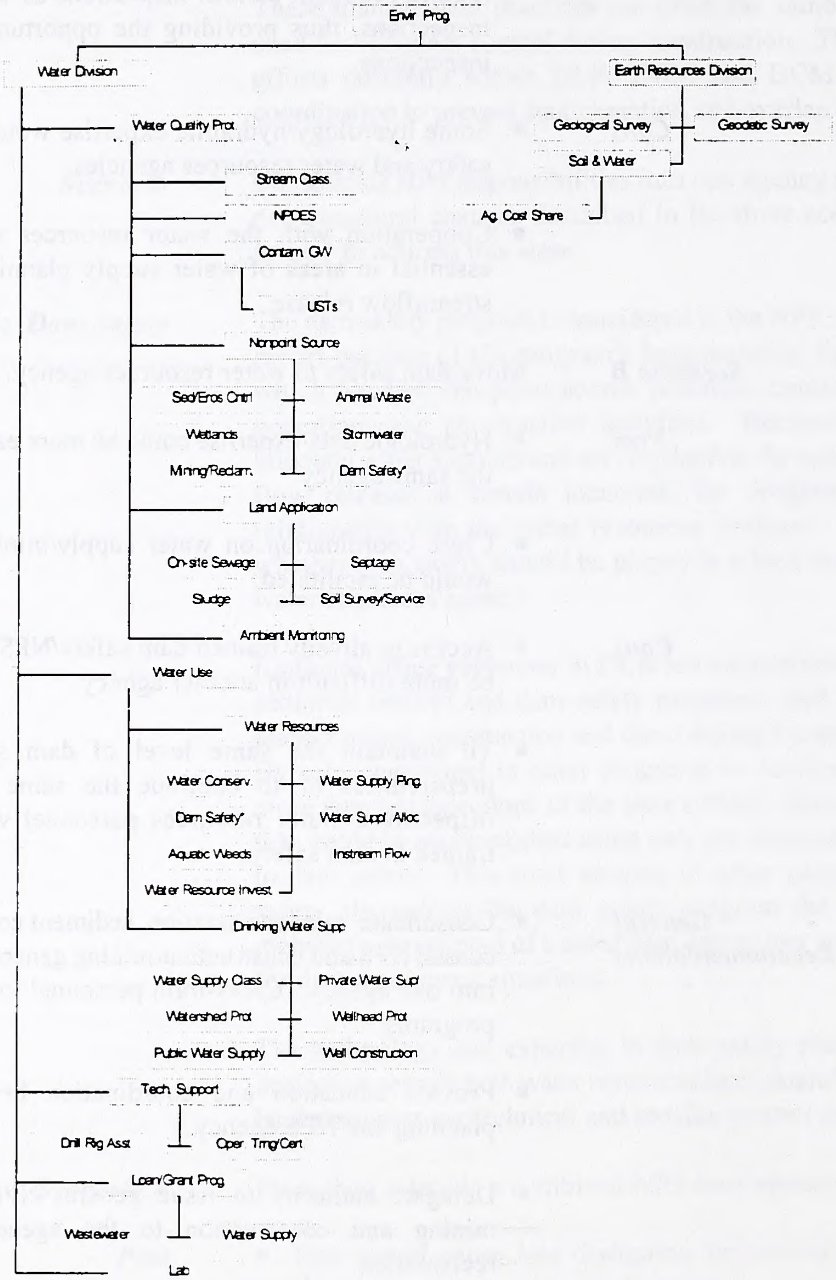
- Access to already trained dam safety/NPS inspectors would be more difficult in another agency.
- To maintain the same level of dam safety emergency preparedness or to continue the same level of annual inspections, water resources personnel would have to be trained in dam safety.

General Recommendations

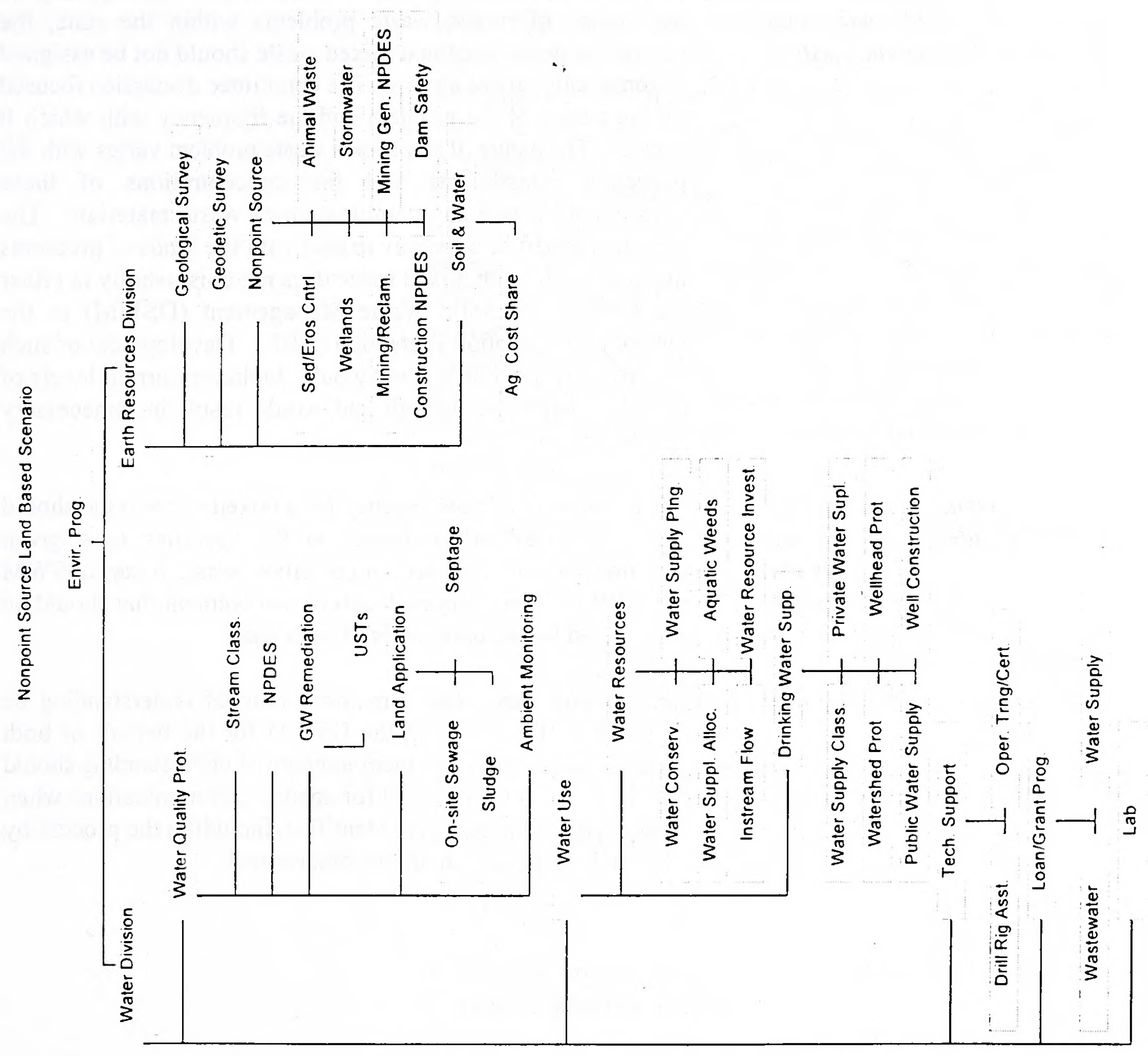
- Consolidate mine reclamation, sediment control, stormwater, coastal NPS and construction/mining general NPDES permits into one agency. Cross-train personnel to work in all these programs.
- Provide education and coordination between watershed planning and NPS agency.
- Delegate authority to issue general NPDES permits for mining and construction to the agency issuing mine reclamation.

Fig. III-3

Nonpoint Source Water Based Scenario



* - Dam Safety could be located in either place


Nonpoint Source Land Based Scenario
Envir. Prog.
Water Division
Earth Resources Division
Geological Survey
Geodetic Survey
Nonpoint Source
Animal Waste
Stormwater
Mining Gen. NPDES
Dam Safety
Sed/Eros Cntrl
Wetlands
Mining/Reclam
Construction NPDES
Soil & Water
Ag Cost Share
Water Quality Prot.
Stream Class.
NPDES
GW Remediation
USTs
Land Application
Septage
On-site Sewage
Sludge
Ambient Monitoring
Water Use
Water Resources
Water Supply Plng
Aquatic Weeds
Water Resource Invest.
Water Conserv.
Water Suppl. Alloc.
Instream Flow
Drinking Water Supp.
Private Water Supl.
Wellhead Prot
Well Construction
Water Supply Class.
Watershed Prot
Public Water Supply
Tech. Support
Oper. Trng/Cert.
Drill Rig Asst.
Loan/Grant Prog.
Water Supply
Wastewater
Lab

ISSUE: Waste

Mixed Waste

"Mixed waste" refers to solid wastes that contain both radioactive and hazardous properties.

Issue 1: Should one agency handle radioactive and hazardous wastes?

Given the broad variation in the types of hazards that could be presented by mixed waste, and the relative infrequency of occurrence of mixed waste problems within the state, the committee determined that mixed waste should not be assigned automatically to one agency. The committee discussion focused on the nature of the problem and the frequency with which it occurs. The nature of any mixed waste problem varies with the particular constituents and the concentrations of these constituents within any combination of waste materials. The technical expertise necessary to deal with the kinds of problems that may occur with mixed waste does not exist wholly in either the Division of Solid Waste Management (DSWM) or the Division of Radiation Protection (DRP). Development of such expertise by any one agency would duplicate current levels of technical expertise in both and would result in unnecessary specialization.

Issue 2: Should the department designate a lead agency for mixed waste?

The assignment of a lead agency for a mixed waste issue should be made case-by-case, based on the specifics in a given situation. Given the variation of mixed waste issues, DSWM and DRP will have varying levels of involvement that should be determined by the particulars of each case.

General Recommendations

EPAT recommends that a memorandum of understanding be prepared by the DRP and the DSWM for the benefit of both agencies' operations. The memorandum of understanding should clearly set forth the protocol for agency communications when cross-divisional projects are identified, including the process by which a lead agency should be determined.

ISSUE: Central Versus Regional Perspective

Grand Issue

The number and location of offices varies considerably among the 10 environmental divisions under study. The one constant is that all divisions have a central office in Raleigh. The Divisions of Environmental Management, Environmental Health, Land Resources, Solid Waste Management and Soil and Water Conservation have offices in each of the seven DEHNR regional offices - Asheville, Fayetteville, Mooresville, Raleigh, Washington, Wilmington and Winston-Salem. Soil and Water Conservation has additional personnel located at several strategic county locations across the state. The Division of Environmental Health has additional offices in Manteo and Morehead City. The Division of Coastal Management has offices in DEHNR's Washington and Wilmington offices plus offices in Elizabeth City and Morehead City. The Division of Forest Resources has its own regional offices in Asheville, Jordan Lake and Kinston plus a series of district, county and special function offices. The Divisions of Radiation Protection, Waste Reduction and Water Resources have no offices outside the Raleigh central office.

Obviously this diversity from a full range of offices to no offices below the central level illustrates different approaches to program delivery as well as different staffing levels. The relationship between the central and regional offices, and the appropriate functions of each, were mentioned as issues in both the customer and DEHNR staff interviews:

The underlying concerns are:

- How to provide improved customer service at the local level and not compromise the overall mission of protecting the environment.
- How to organize and function so that multi-media issues receive adequate attention.
- How to maintain consistency in the interpretation and application of programs among the regional offices.
- At the regional level, how to coordinate the environmental programs of the different divisions when the offices are located in different areas.

- How to distribute program functions and associated responsibility and authority between the central and regional offices.

- How to foster better coordination and cooperation between the central and regional offices.

Resolution of the functions and organizational placement of the regional office will greatly influence the distribution and makeup of staff at the regional and central office levels.

Issue 1: Central/Regional Functions

How to distribute the various programs functions between the central and regional offices is based on these concerns:

- What degree of responsibility and authority should be delegated to the regional level.

- How to build in accountability with transfer of authority to the regional level.

- How to provide better customer service at the local level without compromising environmental protection responsibility.

- How to build in flexibility without losing consistency in program interpretation and application.

Based on interviews with staff, this issue is somewhat contentious between regional and central office personnel. Central staff seem more inclined toward a strong central authority partly to maintain program consistency throughout the state. Most regional staff comments indicate that a shift of personnel resources and authority from Raleigh to the regional offices would create a needed balance. Regional staffers also believe that specific knowledge of projects is better in the region and that certain functions, such as stormwater approvals, could be performed more effectively at the regional level.

The customer interviews provided insight on this issue. In general, the regional office is perceived as more responsive to customer needs. However, some inconsistency across regional offices was reported. The central office is sometimes viewed as ignoring regional recommendations. Some comments alluded to the lack of coordination between the central and regional offices in the permits/plan approvals process. Some expressed sentiment for delegating the approval authority for most permits to the region.

Scenario A: Decentralized Model

This scenario is based on the premise that many environmental program functions are best performed at the local level or as near to the user (i.e., customer) as possible. Hence, local problems are solved locally and local needs are served at the local level to the extent possible. The regional office would become the focal delivery point to servicing environmental customers. The central office would conduct functions with statewide implications, manage special programs that cannot be administered effectively by the regional office, and support the field organization by providing administrative support, special expertise, oversight and coordination.

Functions of the Central Office

- Administrative support
    - Personnel
    - Budgeting
    - Legislative liaison
- Policy, strategic planning & analysis
- Resource planning/coordination*
- Technical support/transfer to regional offices
- Data management/analysis/inventory*
- Modeling support*
- Training/certification*
- Regional coordination/supervision
- Laboratory support
- Financial assistance coordination
- Public information coordination
- Environmental education*
- Property management/acquisition
- Regulatory commission coordination
- Setting environmental standards*
- Risk assessment*
- Setting implementation standards to achieve consistency across regions

* *Responsibility resides at central office but requires regional input and/or assistance.*

Functions of the Regional Office

- Permitting (with a few exceptions)
- Compliance inspections/enforcement
- Standard civil penalty assessment for routine/minor violations
- Compliance and technical assistance
- Approval of corrective action plans
- Financial assistance
    - outreach/technical assistance
    - project management
- Public information contact

- Emergency response
- Data collection/monitoring
- Work teams summary

Pros

- The customer would get local service, which would be more convenient.
- The customer would have greater and more immediate access to technical assistance and, therefore, more timely response from staff.
- More customers are able and likely to build a positive relationship with staff through local service.
- Staff should make more informed decisions since decisions would be based on more knowledge of the local situation.
- Basic support functions are consolidated in one office, which should lead to improved efficiency of operations.
- Multi-media expertise is consolidated in one office, resulting in better preparedness to solve more integrated issues locally.
- In most cases, permit approval time would be shortened.
- Regional employees would be empowered to handle most situations.
- Civil penalities would be issued more timely, enhancing effectiveness of enforcement.

Cons

- Inconsistency in program interpretation and application is more likely among the regions.
- Field staff would require a higher level of skills.
- Personnel would require more training.
- Staff will need greater management skills for stronger coordination between the central and regional offices.
- Central staff influence over personnel may diminish.
- Incidence of civil penalty assessments among regions could be inconsistent.

Scenario B: Centralized Model

This scenario is based on the premise that program functions should be centralized where possible primarily to ensure consistent direction of programs. Regional functions are limited to activities that require widespread weekly performance or that provide field support of central functions.

Functions of the Central Office

- All functions except the three listed below for the regional offices.

Functions of the Regional Office

- Compliance inspections
- Emergency response
- Data collection

Pros

- Centralized direction is more likely to yield consistent interpretation and application of programs and policies.
- Small programs with few personnel with highly specialized expertise seem appropriate to reside in one location.

Cons

- This approach is not "customer friendly" for the many customers who deal with the "faceless bureaucracy" at a remote office.
- The risk of miscommunication between the customer and staff is increased.
- Time and distance factors for central staff make timely response for field visits less likely.
- Regional staff have little authority and are more likely to feel under-appreciated or under-valued.

Issue 2: Coordination of Regional Activities

At what organizational level are regional activities best coordinated? In other words, where organizationally should convergence of authority reside?

Within DEHNR's environmental divisions, regional coordination is currently structured at three different levels, all below the department level.

The Divisions of Coastal Management, Environmental Management, Forest Resources and Soil and Water Conservation coordinate regional offices from the division level. The Divisions of Environmental Health and Land Resources coordinate the regional offices at the section level, and the

Division of Solid Waste Management coordinates the regional office at the branch level.

Though not used by North Carolina, coordination of environmental programs at the department level is not uncommon. This is how the states of Maine, Massachusetts, New York, South Carolina and Washington are structured.

The specific underlying concerns include:

- How can multi-media as well as the single media and program issues be effectively addressed?
- Should central-regional coordination be consistent among divisions, or do other factors such as division complexity and size justify different levels of coordination?
- How is customer service and coordination between divisions affected by the current mixed structure?

Scenario A: Regional Coordination at Assistant Secretary Level

Fig. III-5 depicts the organizational structure to accomplish regional coordination at the assistant secretary level. A Division of Regional Affairs would be established and, like the other division directors, the regional affairs director would report to the assistant secretary. Each regional office would be administered by a regional supervisor who would direct all activities in the regional office and would report to the regional affairs division director. Options for the regional office include organizing by single media or grouping by process that is equivalent to multi-media. The single media orientation would require close teamwork among the various disciplines to render effective performance and satisfactory customer service. Consideration of regional teams, such as cross functional, project and customer, would be essential. A process or multi-media orientation implies an organizational blending of expertise and disciplines for program delivery.

Pros

- Multi-media issues inherently receive increased attention at each organizational level due simply to the organizational structure.
- The regional offices receive the most prominence and visibility in this option, giving greater emphasis to problem-solving at the local level.

Cons

- The Regional Affairs Division, since it is multi-media, has the potential to overshadow the other divisions that are single media. This could increase the risk of polarization rather than unification.
- The single media divisions have less influence below the central level and are restricted in their authority and accountability for protecting the resource.
- Some continuity in environmental protection may be lost if department leadership changes frequently.
- Single media issues may get insufficient attention at the regional level.
- Policy development for the various single media might be complicated by this organizational structure. Strict delineation of responsibility and/or close coordination between Regional Affairs and the other divisions is essential.
- Personnel may develop more loyalty to their organizational level than to the overall mission of protecting the environment. The central and regional levels could be competing rather than cooperating.
- There is potential for confusion among staff about "who" is in charge.

Scenario B: Regional Coordination at Division Level

Fig. III-5 depicts the organizational structure to accomplish regional coordination at the division level. The regional coordinator position is of equal stature with the section chief position, and both positions are supervised by the division director (or, alternately, the deputy director). This structure gives the division director authority over personnel and programs of the entire organization.

This structure requires close coordination and cooperation among divisions to provide multi-media solutions.

Pros

- Accountability to media protection resides at the division level. The division retains direction of personnel and policies throughout the organization, thereby strengthening division authority and accountability for protecting the resource.
- Development and implementation of consistent policy between central and regional levels will be enhanced.

- More personnel at all organizational levels would retain a common identity that tends to promote loyalty and the building of relationships that encourages cooperation.

- Each media has comparable representation and status at the division level.

- Continuity in the administration of environmental programs is more likely given the historical stability at the division level.

Cons

- Accountability for multi-media issues at the regional level is unclear.

- Without formal structure to address multi-media issues at the regional levels, more non-structural solutions, such as better management and creative teamwork among the divisions, will be essential.

Scenario C: Regional Coordination at the Section/Branch Level

Further subdivision of regional coordination to the section or branch level (Figure ?) is a function of staff level management and how specific the function of the section or branch. For example, a division may have only one section large enough to have regional representation. In this case, regional coordination is best done at the section level.

Regional coordination at the branch level may be more appropriate if the section has several large branches with diverse missions. This may especially be the case with federal funding dedicated to a specific program.

Pros

- With regional coordination designated to the lowest level, the focus is given to that particular program.

Cons

- More coordination and cooperation with other agencies at the regional and central office levels is needed for overall environmental program effectiveness and accountability.

General Recommendations

1) To ensure that multi-media issues receive adequate attention and oversight, the EPAT suggests:

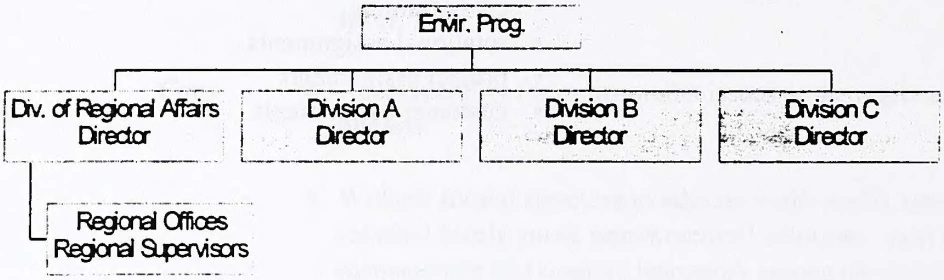
   - multi-media oversight team at the central level composed of the assistant secretary and representatives of each division, and

- multi-media oversight team at the regional level composed of the regional office manager and regional representatives of each division.

2) To foster an atmosphere of cross-functional, cross-media cooperation at the regional level, the following initiatives should be considered:

    - cross-training
    - rotational assignments
    - project assignments
    - customer assignments

Regional Coordination at Asst Secretary Level


Envir. Prog.
Div. of Regional Affairs Director
Division A Director
Division B Director
Division C Director
Regional Offices Regional Supervisors

Regional Coordination at Division Level

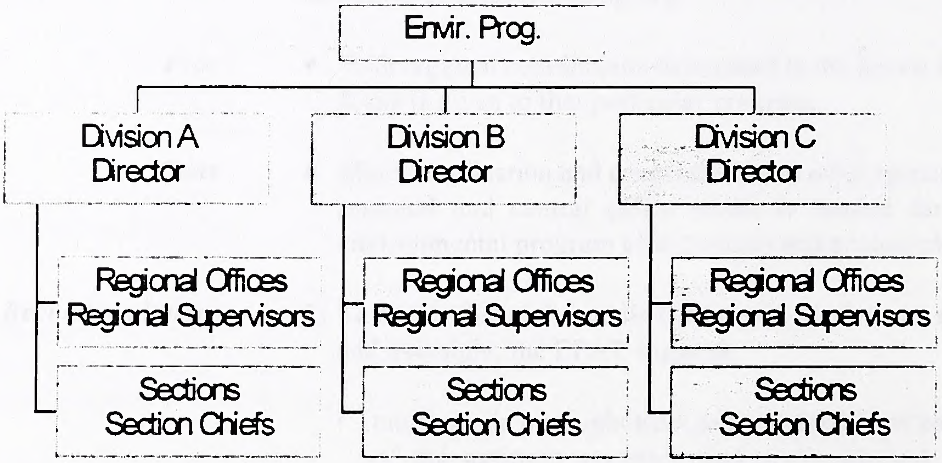
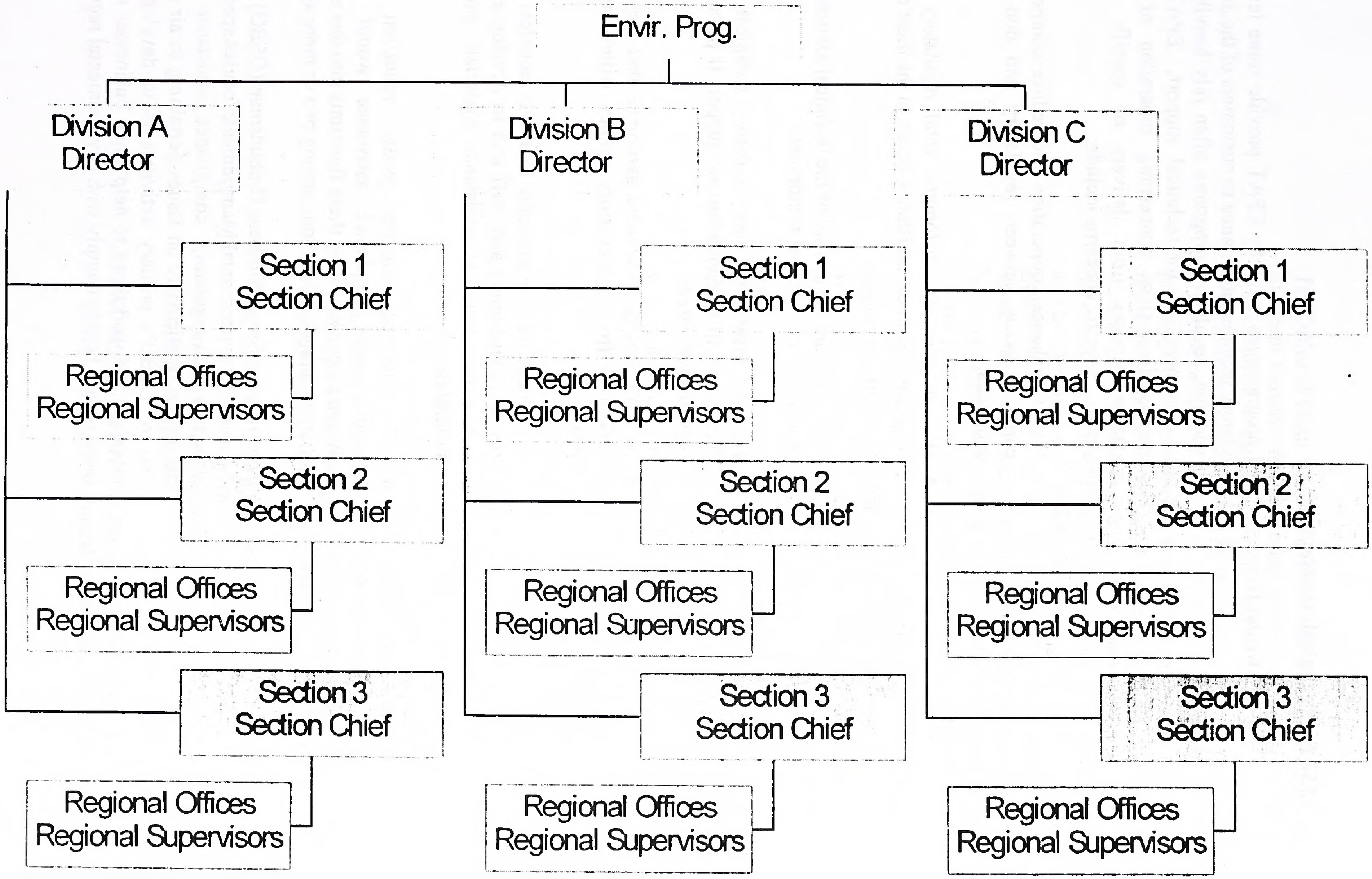


Fig. III-6

Regional Coordination at Section Level



ISSUE: Technical Assistance

Grand Issue

All programs reviewed by EPAT provide some level ofnon-regulatory technical assistance to customers of the department. In addition, regulatory programs often rely heavily on non-regulatory programs for technical support. EPAT has had numerous discussions concerning separation of technical assistance services from delivery of specific regulatory programs. Specific concerns include:

- How to enhance cooperation and reduce competition that currently exists between regulatory and non-regulatory programs.
- How to meet the customers' total regulatory and non-regulatory technical assistance needs in the most convenient manner.
- How to ensure the quality of the technical assistance from a regulatory and practical standpoint.
- How to ensure that non-regulatory technical assistance functions will receive adequate support if placed within a regulatory program.
- How to provide customers assurance that they can seek assistance from a regulatory agency without incurring a penalty.
- What resources are available to assess technical assistance needs of customers and staff and to develop and deliver appropriate technical assistance materials and training programs.

Issue 1: Compliance Assistance and Waste Reduction Technical Assistance

EPAT discussed whether waste reduction technical assistance and compliance assistance would be better delivered by consolidating these functions into one agency or disseminating the functions among two or more agencies.

The Office of Small Business Ombudsman (OSBO) within the Division of Environmental Management, focuses specifically on providing non-regulatory compliance assistance to small businesses, particularly on issues pertaining to air emissions. One of OSBO's primary activities is to develop outreach materials and workshops to help small businesses understand more clearly how to comply with environmental regulations.

The Office of Waste Reduction (OWR) serves as the lead agency in North Carolina for promoting comprehensive multi-media waste reduction (e.g., source reduction and recycling of air and water pollutants and solid and hazardous wastes) and recycling market development. OWR, in coordination with staff in media programs, provides non-regulatory technical assistance on waste reduction to industries and governmental organizations through workshops, outreach materials, and on-site consultation. Many programs (e.g., Air Quality, Water Quality, Hazardous Waste, and Solid Waste) have a stake in reducing waste and pollutant generation, but there are few general regulatory requirements for waste generators to reduce generation. Waste generators must, however, comply with proper management requirements and not exceed permitted pollutant releases to the environment.

The Division of Solid Waste Management [DSWM] is responsible for providing technical assistance on regulatory and nonregulatory matters pertaining to the management of solid waste, including the reduction of solid waste. A statewide solid waste reduction goal has been established with performance measured at the point of disposal, not generation. Efforts to promote progress toward this goal are divided between regulatory and non-regulatory programs in separate divisions (Division of Solid Waste Management (DSWM) - Solid Waste Section and Office of Waste Reduction - Solid Waste Reduction Program (SWRP) and Recycling Business Assistance Center (RBAC)).

This separation has contributed to:

- competition between the programs
- a misperception by the customer that the regulatory program does not provide non-regulatory technical assistance
- a situation in which the customer who desires assistance on both solid waste management and solid waste reduction must seek assistance from two programs
- fragmentation of the goal of promoting solid waste reduction
- the possibility that a customer may receive conflicting advice from the two agencies

EPAT has devised three options or scenarios to address the topic of waste reduction technical assistance and compliance assistance. The options and some discussion of each are outlined below.

Scenario 1 Combine the Office of Waste Reduction with the Office of Small Business Ombudsman. The functions of this program would include:

- assessing the technical assistance needs of customers and staff to identify priorities for developing outreach materials and workshops and internal training programs
- facilitating provision of technical assistance and compliance assistance by regulatory personnel in single-media programs
- providing a multi-media perspective on rule coordination, enforcement activities, resource management plans, etc.
- providing direct multi-media waste reduction technical and compliance assistance and outreach to customers, as needed

A focus of the program would be to enable regulatory staff to provide waste reduction technical assistance and compliance assistance through the development of resource materials and outreach programs. Strong coordination between organizations would be essential to ensure the quality of the information delivered and that priority compliance and waste generation concerns are adequately addressed.

Pros Consolidates existing waste reduction technical assistance and compliance assistance functions into one organization to promote a comprehensive waste reduction and customer assistance effort.

- Leverages the resources of regulatory staff to increase delivery of waste reduction information to the customer. Provides regulatory staff with useful tools to facilitate technical assistance.
- Allows regulatory staff to improve technical assistance delivery by providing useful outreach materials, facilitating regulatory staff's involvement in workshops, and providing training.

Cons

- The structural arrangement that supports competition between regulatory and non-regulatory programs remains unchanged.

- Maintains current separation of waste reduction technical assistance coordination from regulatory programs that are accountable for environmental protection. Consequently, the perception of regulators as penalizers may be reinforced.
- Leveraging of staff resources may not be possible where program staff have already been reduced or have already been heavily leveraged for existing responsibilities.
- Requires very strong coordination between regulatory and non-regulatory programs to avoid duplication of activities and ensure the quality of the information provided.
- Limits ability of regulatory programs to set priorities for waste reduction activities.

Scenario 2

Merge the Solid Waste Reduction Program and Recycling Business Assistance Center of OWR with the Solid Waste Section of the Division of Solid Waste Management, and incorporate the remaining waste reduction and pollution prevention aspects of the Office of Waste Reduction into the regulatory programs for each media.

Pros

- Helps overcome the concern of separation of technical assistance from regulatory functions and potential competition between regulatory and non-regulatory programs aimed at promoting waste reduction.
- Reduces the likelihood of a customer receiving waste reduction advice that conflicts with regulations administered by another agency.

Cons

- No single organization would have responsibility for providing multi-media coordination for waste reduction technical assistance or for providing a multi-media perspective on DEHNR rules and policies.
- Potentially increases the likelihood of a customer getting waste reduction advice that would contribute to an increase in waste to another medium (i.e., cross-media transfer).
- Customers who need multi-media waste reduction assistance would need to consult up to four organizations.
- As a result of RBAC's proximity to a regulatory agency, the Department of Commerce may be reluctant to refer potential

recycling businesses to the RBAC for assistance. This reluctance is associated with the misperception that regulatory agencies do not provide technical assistance.

Scenario 3 Combine the Pollution Prevention Program from the Office of Waste Reduction with the Office of Small Business Ombudsman (as in Scenario 1) to form an agency that coordinates technical assistance efforts throughout DEHNR, but move the Solid Waste Reduction Program and Recycling Business Assistance Center from the Office of Waste Reduction to the Division of Solid Waste Management as its own section (as in Scenario 2). This option represents a compromise between Scenarios 1 and 2.

Pros

- Combines existing industrial pollution prevention technical assistance and compliance assistance functions in one organization to better coordinate information delivery to meet the needs of the industrial customer.
- Leverages the resources of regulatory staff to increase information delivery to the customer. Provides regulatory staff with useful tools to facilitate technical assistance.
- Consolidates responsibility for promoting solid waste reduction, providing potentially improved coordination for solid waste management and reducing the potential for competition between DSWM and SWRP.
- Helps overcome the perception that DSWM does not offer technical assistance.
- Enables customers to obtain comprehensive solid waste management assistance from one organization.
- Reduces the likelihood of customers receiving solid waste reduction advice that would place them in regulatory jeopardy from a solid waste management standpoint.

Cons

- Separates coordination of technical assistance for solid waste reduction from technical assistance for reduction of pollutants for other media.
- Customers who need multi-media waste reduction assistance must potentially seek assistance from two organizations.
- Potentially increases the likelihood of a customer getting solid waste reduction advice that would contribute to an

increase of waste into another medium (i.e., cross-media transfer).

- As a result of RBAC's proximity to a regulatory agency, the Department of Commerce may be reluctant to refer potential recycling businesses to the RBAC for assistance. This reluctance is associated with the misperception that regulatory agencies do not provide technical assistance.

Issue 2: Soil Science Technical Support

EPAT discussed ways to ensure that regulatory programs have sufficient and timely access to technical expertise without having to duplicate expertise that may already exist in other agencies. Soil scientists in the DSWC provide soil mapping and soils interpretation support to multiple agencies, such as DEM (wastewater and sludge land application), DOT (wetland and prime farmland identification), NCDA (soil identification for various studies), and local soil and water conservation districts (wetland, highly-erodible lands, and soil surveys). Soil scientists in DEH, in close coordination with local health departments, provide soils interpretation support specifically for on-site wastewater disposal sites. The issue of providing soil interpretation support is further addressed in the NPS analysis section of the report.

Recommendation

Structural and non-structural options for soil science technical support are discussed in the non-point source section of the report.

General Recommendations

1) The team believes that, as part of an overall focus on the customer, technical assistance should be a part of every employee's job description and work plan. One way to implement a shift toward technical assistance is to rotate staff between regulatory and non-regulatory assignments or to ensure that each staff person is assigned technical assistance responsibilities a certain percentage of his or her work time.

2) The department should develop a directory of technical/financial assistance resources available to customers and staff. First-line staff should be trained on how to use the directory, and all staff should receive appropriate training on technical assistance resources available to them and their customers.

3) Each agency should define the level of technical assistance it is able to provide. Each division director should communicate to each level of staff how and when they are to provide technical assistance to customers and to other staff.

ISSUE: Air Quality Protection

Grand Issue

While not a focus of much EPAT discussion, the issue of problems or overlaps in the Air Quality Section of DEM arose. The discussion focused primarily on the potential for improving efficiency by consolidating multiple inspections or permitting requirements. The following case can be used as an example. Industrial customers may have inspectors from two divisions inspecting the same manufacturing process for different things (e.g., hazardous waste and air emissions). As another example, service stations and tank farms may be inspected by air quality staff for vapor recovery equipment, by groundwater staff for underground storage tanks, and by agriculture staff for meter certification. These areas point to possible opportunities to cross-train staff to conduct routine inspections currently performed by multiple staff, particularly for small operations.

The potential for permit consolidation also exists. For example, conditions for proper management of residuals from an air pollution control device could be merged into the permit for the control device.

As focused discussions on water and wastewater issues occurred, it seemed apparent that the nature of technology needed for air analysis is different from that for other environmental media, such as water. In addition, the DEM director's attention is split between two large, complex, and separate activities: air and water pollution control. The team did not research problems internal to the Air Quality Section, and the relative exclusion of this section of the agency from our analysis does not imply that there are no issues that need to be addressed.

Scenario

Break out the Air Quality Section into a separate division. Conduct an EPAT-like study into the structure and function of the new division to look for improved program delivery.

Pros

- Air Quality is large and complex enough for representation at the division level. The director could focus solely on air issues.
- The division directors will be able to focus more on media issues.
- Other water programs can be consolidated without significantly increasing the size of the largest division and adding to any problems that might result from lopsided agency sizes.

Cons

- Without single-agency oversight, the potential for cross-media transfer of pollutants is increased.
- May de-emphasize comprehensive environmental protection in favor of a purer media approach.

General Recommendation

Air Quality should be a stand-alone division in the department. The department should explore opportunities for improving efficiency by consolidating activities, especially for routine activities described above. The department should, however, avoid duplicating expertise in multiple organizations (e.g., creating water quality protection expertise in the air agency), relying instead on increased cross-training and coordination.

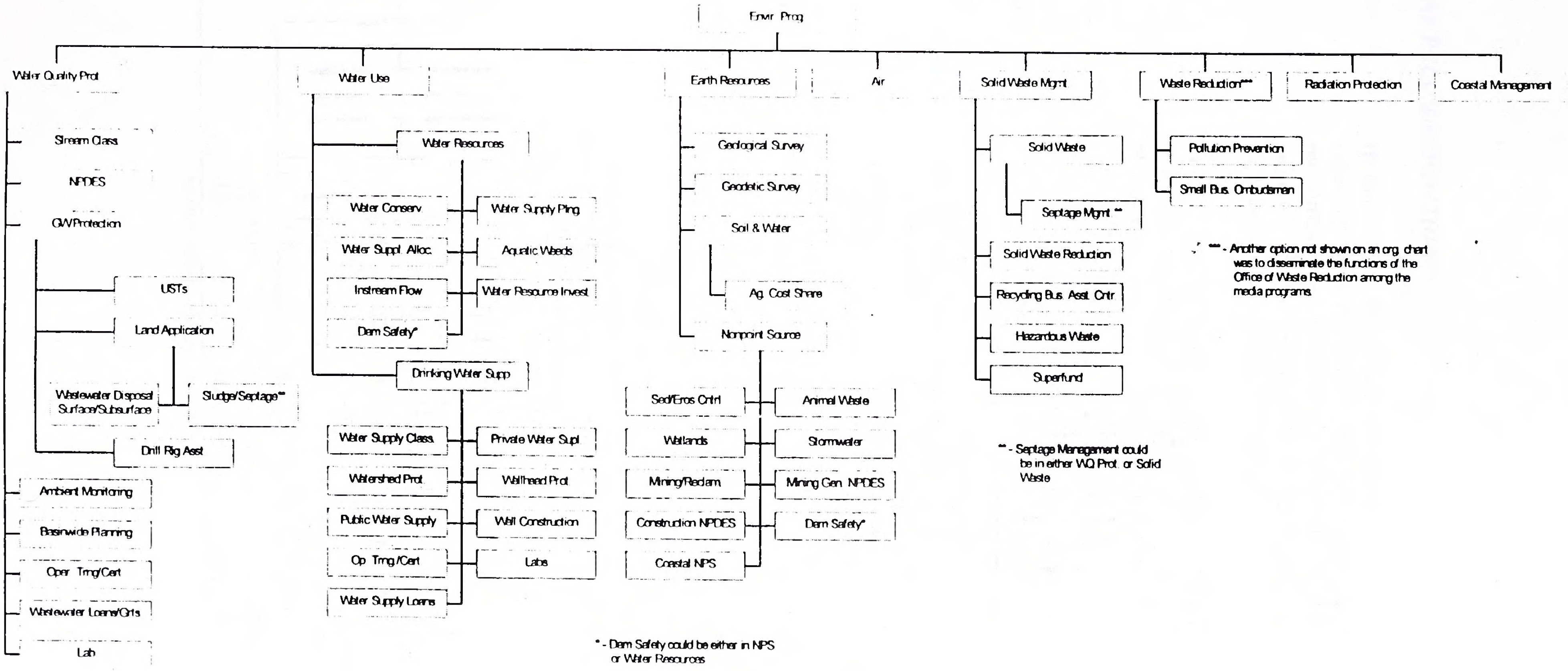
ILLUSTRATIVE ORGANIZATIONAL CHARTS FOR ISSUE-BASED SCENARIOS

The following organizational charts (Figs. III-7, III-8) capture most of the scenarios outlined in the issue-based scenario discussion. The charts represent a graphical illustration of *some* possible combinations of the issue-based scenarios. These charts should not be perceived to be the preferred organizational approaches for DEHNR. Obviously, there are many other combinations of scenarios contained in the issue-based discussion that are not illustrated on the charts. Because of this, the organizational charts should not be used alone, but in the context of the issue-based discussion.

The charts include detail of functions for some divisions, and but for all of them. The detail is intended to clarify which functions could be grouped with other functions. Where detail is not needed for clarity, none is provided. The detail is not intended to include all of the functions of the division, only those functions for which the team felt clarity was needed.

Fig. III-7

Illustrative Organizational Scenario

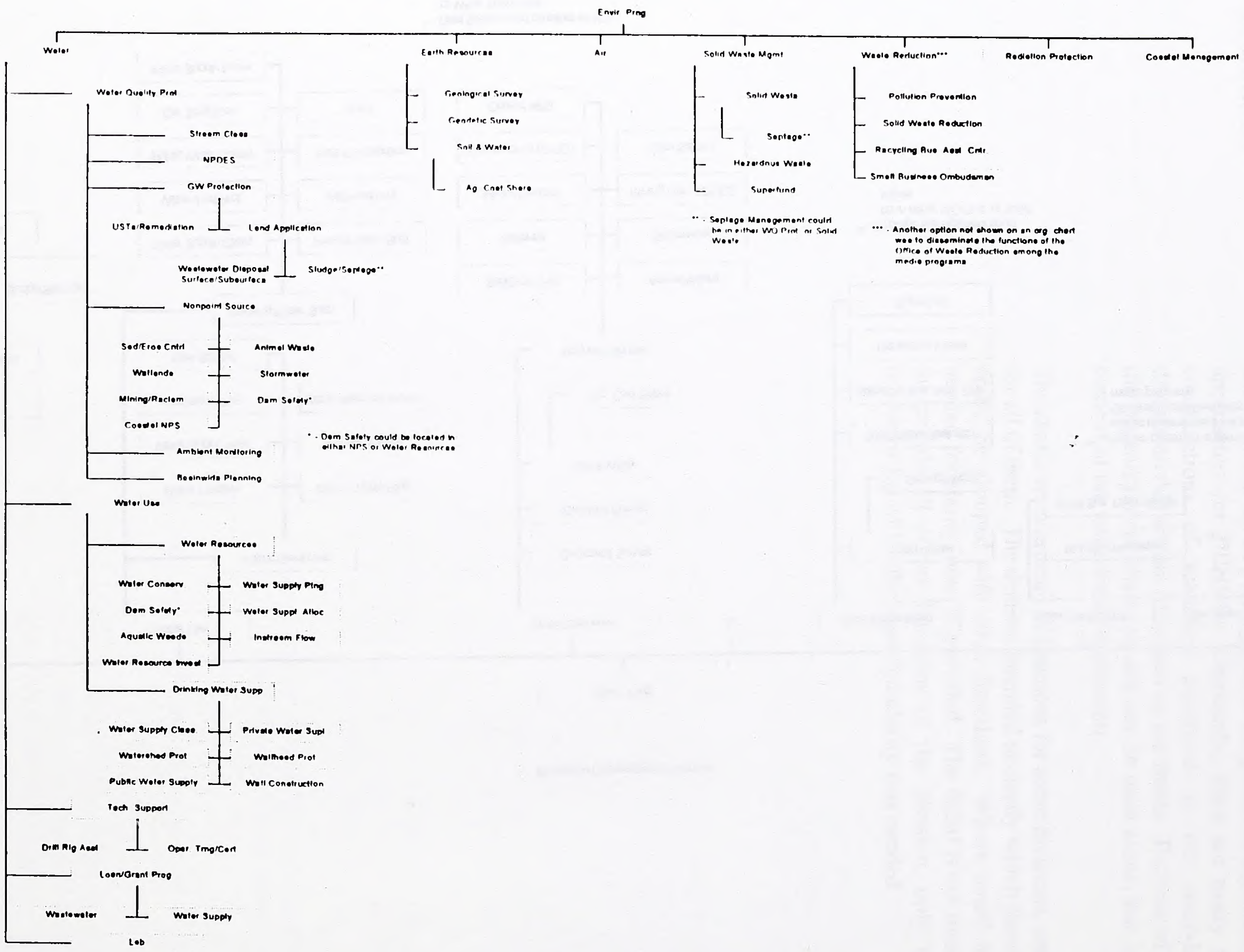


*** - Another option not shown on an org. chart was to disseminate the functions of the Office of Waste Reduction among the media programs

** - Septage Management could be in either WQ Prot. or Solid Waste

* - Dam Safety could be either in NPS or Water Resources

Illustrative Organizational Scenario



* - Dam Safety could be located in either NPS or Water Resources

** - Septage Management could be in either WQ Prot. or Solid Waste

*** - Another option not shown on an org. chart was to disseminate the functions of the Office of Waste Reduction among the media programs

Fig. III-8

NON-STRUCTURAL RECOMMENDATIONS

In addition to the options presented earlier in this report regarding specific issues and processes, more general recommendations for improving performance, efficiency, and customer service emerged from the team's review of the department's environmental programs.

These recommendations were developed using information collected from customer and staff interviews, and from analysis of department processes. Structural recommendations appear in other parts of the report.

Communication -- Customer Education

The team was repeatedly told in customer interviews that better information is needed about the department's programs and processes. Many of the department's processes require review or action by more than one office or division, resulting in several hand-offs within and among divisions. Without the assistance of a professional consultant, many customers get lost in the processes and become frustrated. Many DEHNR customers do not have the resources to hire consultants, nor should they be required to do so. To compound the problem, the team discovered that many staff have little or no knowledge of all of the steps of the process of which their job is a part, and therefore, are unable to assist customers. Likewise, staff interviews revealed that many staff are unaware of the ways in which other divisions' activities relate to their agency's activities. This failure in collective knowledge is especially unfortunate for the customer whose needs (e.g., development permits) require the participation of more than one division and who expects interdivisional coordination.

The following recommendations attempt to address these concerns:

- Lead agencies for permitting and financial assistance processes should develop and keep up-to-date detailed process maps to help customers and staff understand and navigate the department's processes. The maps should be published in a process directory, similar to the permit directory. The maps should also be used by staff to identify opportunities for further improvement of major department processes.

- Develop a communication mechanism, such as an 800 or 900 number help line, or an electronic directory that is accessible via the Internet, to direct customers to the appropriate division and staff.

- Institute frequent internal and external communication events, such as open houses and workshops, to educate customers and staff about department programs and processes.

Human Resources

Another area of concern raised in customer interviews is staff turnover. Several customers noted that there is high turnover of technical staff, particularly in the area of permit review. Because the state's processes are complicated and difficult to follow, there is a thriving private market for professional consultants to assist customers with permit applications and compliance with state regulations. A significant number of staff remain with the state just long enough to learn what they need to know to become private consultants. The frequent change in staff causes delays in processing permit applications as new staff learn the process and the particulars of customers' applications. Too often the customer knows more about a process than does the staff. The department needs to finds ways to retain talented staff

In addition, as mentioned above, many staff have little or no knowledge of the "big picture." Staff need to be educated about how their jobs fit into the goals and objectives of the department.

The following recommendations attempt to address these concerns:

- The department should form a personnel process action team to address the following objectives:

    - Promote and encourage independent, multidiciplinary, productive and professional staff.

    - Provide real incentives and rewards.

    - Reduce turnover.

    - Implement creative options to meet changing needs of the workforce, such as flexible work schedules, working at home, and job sharing.

- Enhance orientation for new staff by providing training on the entire process of which their job is a part, and information on how their job fits into the goals of their division and the objectives of the department.

Program Efficiency

The following recommendation regarding improving program efficiency can be implemented across several, if not all, divisions. Because of its broad application, it appears here rather than in the earlier sections of the report.

- Continue EPAT-like teams throughout the department -- the team believes that the tools used and the lessons learned from the processes used to develop this report can benefit all operations in the department.

Privatization

- DEHNR should investigate the licensing of cleanup professionals (LCPs) who would be given authority to approve low risk site cleanup plans and sign off completed plans. The state would establish criteria to determine sites that could be turned over to an LCP. Completed cleanup plans would be filed with the state. Some percentage of the plans would be audited by the state to ensure that the LCP did an adequate job. Penalties, including license revocation, could be assessed in the event that a cleanup proved inadequate. This approach could free up scarce state resources to concentrate on higher risk projects. This innovative approach has the potential for reducing the large backlog of groundwater remediation plans awaiting approval and speed up the actual cleanup of contaminated sites. Massachusetts implemented a similar program to help reduce its backlog of projects.

Policy Development/ Implementation

A number of customers and departmental employees complain that policies are often developed in "academic" isolation in Raleigh with little or no feedback from the field/permitting staff.

As a consequence, the policies may be difficult or impractical to implement, creating greater delays in processing permits and more confusion for the customer. Field staff state that they often feel the central office is "out of touch" with reality.

The following recommendations attempt to address these concerns:

- The central office/planning staff should, in general, gain greater exposure to the day-to-day activities of field/permitting staff. Cross-training would be valuable, especially for staff who are responsible for drafting rules and regulations.

- In general, the central office of most agencies should make greater efforts to include field staff in drafting and reviewing policies and rules.

Data Management

Several concerns were raised by internal and customer interviews. These concerns are:

- Different agencies often request the same information from the customer resulting in unnecessary delays and repetitive efforts by the customer.
- The department has no established mechanism for one agency to access data kept by another agency.
- Support for overall data system maintenance and training is currently inadequate. Agencies without their own computer specialists or local area network (LAN) administrators have inadequate support to set-up, maintain and train personnel to use data networks.
- Ongoing activities in the department appear focused on Geographic Information Systems (GIS), may overlook other data needs, and are not widely publicized..

The following recommendations attempt to address these concerns:

- Data collection and management should continue to reside with the individual agencies.
- The department should compile a complete list of databases and publish and maintain a data directory so that other agencies and the public know what data is available on GIS and non-GIS formatted data.
- The department should conduct a needs assessment to identify training and system support needs for agencies.
- The divisions should develop compatible databases for use on the wide area network (WAN).

- Support for WAN should be ensured by improving and expanding network connections, developing training and tools for decisions makers and providing maintenance support for operational systems.

- Cost effectiveness of GIS databases should be evaluated. Where cost effective, GIS databases should be expanded. However, other data in less expensive formats may prove just as useful.

Loan and Grant Programs

Many agencies in DEHNR and other departments offer loan and grants for specific types of projects. It is sometimes difficult for the customer to know what is available. Loan and grant funding can be particularly difficult to access by the small customer.

EPAT considered the possibility of consolidating all departmental loan and grant programs into one office, or even to consolidate loan and grant programs by media. While consolidation would reduce the number of contact for the customer and possibly make it easier for the customer to obtain information about these programs, the disadvantages appeared to outweigh the advantages. It would be difficult for a few staff people to have much understanding of a large number of loan and grant programs. Loan and grant programs are often tied to technical assistance and project management, which is usually best provided by field staff related to that particular activity. Additionally, the loan and grant programs provide a strong positive image within the permitting/regulatory agency which could be lost by relocating the program to a separate office

The following recommendations attempt to address these concerns:

- Loan and grant programs should continue to reside within their respective agencies.

- The department should publish a directory of its loan and grant programs.

- The department should periodically conduct workshops around the state to educate the customer about these programs and provide assistance (or referral information) in completing the applications.

- Loan and grant personnel should concentrate on technical assistance only for loan and grant funding activities, while technical assistance for other areas (e.g., plan development, facilities assessment, etc) should reside with the program area.

- Similar loan and grant programs in other departments, such as Community Development Block Grants, should be evaluated for the possibility of consolidation or coordination.

Leadership

- DEHNR should lead by example by employing waste reduction principles in its operations and those of its contractors. Examples include using double-sided copies, reviewing chemical purchases to identify opportunities to use less-toxic substitutes, and ensuring that all staff have convenient access to recycling containers and use them to the greatest possible extent.

APPENDICES

Appendix A: Acronyms

Appendix B: Customer and Staff Interviews

Appendix C: Process Maps

Appendix D: Current organization charts of EHNR environmental programs

Appendix E: Organization charts of environmental programs in other states

APPENDIX A

ACRONYMS

BMPs	best management practices
CAMA	Coastal Area Management Act
CERCLA	Comprehensive Emergency Response and Corporate Liability Act
CZMA	Coastal Zone Management Act
CWA	Clean Water Act
DCM	Division of Coastal Management
DEH	Division of Environmental Health
DEH-PWS	Division of Environmental Health-Public Water Supply
DEHNR	Department of Environment, Health and Natural Resources
DEM	Division of Environmental Management
DEM-GW	Division of Environmental Management-Groundwater
DEM-WQ	Division of Environmental Management-Water Quality
DFR	Division of Forest Resources
DLR	Division of Land Resources
DRP	Division of Radiation Protection
DSWC	Division of Soil and Water Conservation
DSWM	Division of Solid Waste Management
DWR	Division of Water Resources
EPA	Environmental Protection Agency
EPAT	Environmental Programs Action Team
GIS	geographic information system
HQW	high quality water
NPDES	National Pollutant Discharge Elimination System
NPS	non-point source
NRCS	Natural Resources Conservation Service
ORW	outstanding resource water
OSBO	Office of Small Business Ombudsman
OWR	Office of Waste Reduction
RCRA	Resource Conservation and Recovery Act
TA	technical assistance
USDA	U.S. Department of Agriculture
WAN	wide area network

APPENDIX B

THEMES FROM CUSTOMER SURVEYS

Several existing programs or processes within DEHNR were selected for analysis by the team. One part of the analysis included interviews of several categories of customers , including applicants, consultants, environmental group representatives, developers, program staff, and state and federal employees. Feedback provided by the customers was reviewed for trends or themes that might be useful in improving the programs or processes. Several themes were identified and included in this report. Because there was substantial feedback from DEHNR employees on issues not specifically part of the process being reviewed, those were compiled as a separate listing -- as employee themes -- and included in this appendix.

Typical Questions Posed to Customers

Questions posed during the interviews were varied; however, typical questions were:

- What is the extent of your experience in dealing with state agencies on this process?
- How many separate approvals or permits are normally required to complete this process?
- How do you find out how to get information? Whom to talk to? How to get access to the activity?
- How many separate state agencies, or separate groups within an agency, have to be satisfied for each of the approvals or permits above? Did the permitting agency assume the lead in getting and resolving comments from other agencies or groups?
- How long does it normally take to obtain required approvals for this process?
- What aspects of the process work well?
- What aspects of the process need improvement?
- How would you rate the service you received from the state agencies involved?
- How well do agencies coordinate?

- How well coordinated are the agency programs (i.e., same standards, clearly defined responsibilities, clearly defined separation of responsibilities)?
- One thing the state could do to improve the process is...(interviewee to complete the statement, repeating as long as he/she had items to add)
- I would like to compliment the process on the following...
- The process is confusing in the following way...

THEMES

Information obtained through customer interviews was compiled and several themes identified.

Jurisdictional Overlap

- Jurisdictional overlap between agencies sometimes leads to delays because no one has sole responsibility for resolving differences. The applicant is often left to resolve the differences with little or no assistance. Larger companies or consultants often know how to arrange the cross-jurisdictional meetings required to resolve these questions. This problem is reported to be worse in cases where additional permits are required to dispose of treated groundwater or air stripping. Lack of clear roles and responsibilities between agencies creates a big loop that is difficult for the customer to navigate. This provides a situation where the customer is almost forced to hire a consultant who is familiar with the state processes.
- Overlap in jurisdiction also makes it difficult for the permitting agency and the customer to know the current status of the review. One person stated that the typical state agency response to jurisdictional problems is to request more information. However, some believe that communication between agencies has improved over the past two years.

Accountability

- Accountability appears to be lacking due to fragmentation -- both within and across agencies for the review of permit applications and corrective action plans. This lack of accountability is also related to item number one above. Any consolidation of environmental regulatory agencies should center on consolidation of functions to allow a single focus on total environmental evaluation.

Turnover of Permitting Staff

- High turnover of permitting staff leads to lack of expertise, which causes delays in the review and a reduction in the quality of the reviews. Some consultants say that they are continually training new state employees due to high turnover. As an example, a new employee assigned to review a project costing over $1,000,000, that may bankrupt the applicant and cost several jobs, is inexperienced and has difficulty communicating with clients.

Narrow Perspective

- Many employees are too specialized in their areas and are not aware of the entire process/program. Also, many complain that the General Assembly lacks awareness of much of the environmental work of DEHNR.

Comparison to Other Agencies

- Several respondents contend that DEHNR does a much better job than its counterparts in neighboring states and at EPA. This is important since change must be thought through carefully to ensure it improves the process.

Management of Data

- Each agency has its own database management system so the same information has to be supplied multiple times. This contributes to frustration and delays. Some suggest that GIS be the centerpiece of the department review process.

Excessive Time for Approval of Corrective Action Plans

- Time required for approval of action plans by state agencies is too long. The state gives a deadline for plan development, but then takes much longer (i.e., sometimes a year or more) to review the plan. Several argue that a standard should be applied for state review of permits, action plans, etc. However, several also note that North Carolina reviews projects faster than surrounding states.

Innovation to Reduce Time for Action Plan Approval

- Several suggest that the state consider innovative ways to improve the time required for approval of action plans. Many do not believe that state regulators and staff understand the real world or the importance of time to a developer. One suggestion in the groundwater program is for the state to license individuals as "licensed site professionals," who would be given authority to approve certain low risk corrective action plans. If the project meets the low risk criteria, the licensed site professional could approve the clean-up plan, sign off on its completion and file the final paperwork with the state. The work would be subject to audit by the state and the specialist could receive sanctions, including license suspension. Innovative ideas are needed for other areas as well.

Lack of Consistency

- Inconsistency is a theme echoed by many customers, often with slightly different applications. For example, the regional office concept is heartily endorsed by most customers, but many also suggest that more consistency should be forced between the regions. Some suggested that all wastewater management functions need to be in one agency. They contend that the current situation is a mess.

Other consistency items are as follows:

- Some suggest that a RCRA facility receives more attention than other similar or greater problems at nearby sites.
- Most suggest that consistency has improved over the past two years.
- One says that the DEHNR Environmental Permit Directory has helped improve consistency in the routing and guidance given to permit applicants.
- There is no policy on preferred options for disposal of treatment wastes. Sometimes there are conflicting policies between agencies. This leads to confusion and inconsistency in disposal of treatment wastes.
- Fragmentation of the process means no one is coordinating the overall project resulting in inconsistent application of standards.
- Frequent changes in regulations (particularly non-point source projects) leads to inconsistency in application of the regulations.
- Some agencies are reported to require an approved permit from another agency before they will act on a permit application. This should be discontinued or turned into formal department policy.
- Consistency problems are reported in application of standards among regions within DEM, and between RCRA, EPA and DEM.
- The adoption of state standards that are more stringent than federal standards is cited as a problem by several customers. One recurring example cited by customers is disparity in minimum size of wetlands that require a permit and

mitigation. The Corps of Engineers requires a dredge and fill permit for impacted wetland areas greater in size than one acre, whereas the state requires a permit for impacted areas greater than one-third acre.

- Also some state agencies are reported to have more stringent standards than other agencies. Several customers question the basis and need for more stringent standards. Some suggest that it is a control issue. They theorize that the standard setting agency is using this as a method to be the "controlling" agency for permits issued by other agencies since the permit has to meet the more stringent standard issued by that agency. This allows the agency with the more stringent standard to dictate the process.
    - Uneven enforcement is reported even within the same agency. Customers say that some agencies enforce one case but won't touch a similar or worse case.
    - Some say that actions are inconsistent and dependent on the personality of the staff.

Combined Public Hearings

- Some customers recommend that a single combined public hearing be held for projects that require multiple permits and public hearings.

Technical Review of Applications/Plans

- Technical review of applications/plans received a mixed rating. Some believe that state employees are knowledgeable. Others believe the turnover is so great that they must constantly educate new state employees on state regulations and requirements. Some suggest that the time required for approval of action plans contributes to increased review time because of the need to train new personnel assigned to replace those who leave. Another complaint is that enforcement personnel are often assigned to review technical plans in areas where they have little or no expertise or experience. Some report circular reviews as a result of changing requirements as the permit/plan passes from one reviewer to another. There were complaints that projects are moved from one staff person to another and the applicant has to start over with the new person. Some argue that agencies sometimes hold projects and then return them as incomplete just before the agency review deadline. Some report that agency response times is so slow and inefficient that paperwork is sometimes lost and has to be resubmitted.

- Some believe that the expertise of systems engineers is not given enough weight even though their knowledge and experience often is greater than the reviewer. Some state that technical experts are needed in specific areas so jobs should not be over generalized. On the other hand, they suggest that the reviewers background should be broad and general.

Technical Assistance

- Several customers suggest that the permitting or regulatory agency should provide more technical assistance. Technical assistance up front was reported to be one way to reduce the need for Raleigh review of permits/plans and the number of non-compliance situations encountered later. Customers suggest that the state take more of a partnership approach. For example, the state should be more forthcoming in sharing technical solutions that have worked at similar sites. One complaint is that the state often recommends that the applicant "read the literature," rather than provide more specific guidance from the agency files on possible solutions. Some inspectors view technical assistance as part of their jobs, but this varies between organizations. Some in the regional offices see themselves as enforcers.

Courtesy and Efficiency

- Courtesy and efficiency problems are sometimes encountered in phone calls to agencies. In some cases the clerical person assigned to the phone is rude. In other cases the person has no knowledge of the process and can offer no information to the caller. Many customers say that professional staff are generally courteous and helpful.

Coordination/Cooperation Within DEM and Between DEM and Other Agencies

- Many customers contend that DEM doesn't work well with other agencies. Many say that the agency focuses on empire building rather than cooperation, and ignores regional staff recommendations in too many cases. Too much variance is reported between regions in the application of regulations. Some say that there is too much infighting within the division. Some argue that DEM's focus should be on assisting towns and counties rather than trying to justify its existence by regulating these entities.

The number of negative comments may be a result of the size of DEM and the large number of cross-division activities. A summary of some specific comments follows:

- DEM is not responsive, ignores the environmental community.

- There is no basin-wide planning. DEM just goes through the motions.

- DEM can't communicate, other agencies aren't involved.

- 401 water quality certifications take too long because there are not enough people in the field.

- DEM is too centralized, regional staff recommendations are often ignored, and the central office often makes political decisions.

- DEM used to have one point of contact. Now at least three people must be satisfied. There are too many people in the loop.

- DEM is reluctant to work with DCM.

Division of Responsibility Regions/Field Offices

- Some report that agencies with regional or field offices that recommendations. In addition, several customers commented on the convoluted process that permits/approvals follow from the regional office to Raleigh. Sometimes, the permit or plan travels back and forth between the region and Raleigh several times before resolution is reached. Many believe that approval authority for most permits could be delegated to the local region or field office because these offices are closer to the customer and generally more responsive to customer needs. Some say that there is too much paper movement within the agency and this makes it hard to track projects. Decision making should be consolidated. The regional office is not a guarantee of success since customers also report that significant inconsistency exists in the approach of the regional offices. Some see that state as inconsistent and indecisive at times. Many push the political button because the staff doesn't seem to respond to customer needs.

Division of Coastal Management

- Some complimented the division for its responsiveness and attempts to reduce overlap and duplication with other state and federal agencies. They contrast the division with other agencies such as the Corps of Engineers. They report that division personnel make field visits on a timely basis as part of their process. Some customers, however, believe duplication still exists between the CAMA permit process and others permits such as the Corps of Engineers.

Non-Point Source Process

- Some report that the non-point source process/permitting has slowed over the past 18 months. The range in comments varied from "no serious problems" to "the process is broken."

Third Party Input

- Some agencies are reported to take unsubstantiated third party input at face value even though it might not be supported, leading to delays and inconsistency in handling of permits or plan reviews. Some recommend that DEHNR rely more on an applicant's expertise when a track record is available. Applicants said, "don't require so many consultants."

Service to Customer

- Many recommend that the state focus more on service to the customer. They would encourage agencies to look actively for areas where environmental regulation compliance can be rewarded rather than penalized. For instance, if a licensee identifies a problem and corrects that problem, the customers feel that the licensee should not be penalized for being forthcoming and reporting the problem.

- Some believe that the state has accomplished as much environmental improvement as possible through regulations. Further improvements, they argue, will have to come through mutual cooperation and education.

Inspections

- Several suggest that inspectors be cross-trained to handle multi-media inspections at facilities, rather than sending different inspectors at different times to inspect similar regulations and requirements. Some complain that compliance inspectors don't get to sites often enough or quickly enough.

Specialized Knowledge of Industry Processes

- Some industry representatives express a desire to have permit review specialists for their industry to facilitate application reviews.

Increased Awareness of Assistance Available

- Several report that the public is usually not aware of the variety of technical expertise available within DEHNR or that technical assistance is available.

Financial Assistance

- Some report that the different financial assistance programs have different requirements due to status or regulations, which creates confusion. Applicants often receive help from the League of Municipalities, Council of Government and other groups.

Other financial assistance issues are as follows:

- Small systems have a difficult time gaining access because of the difficulty of properly completing applications.
- Small systems are discriminated against and need assistance to interpret and comply with state regulations.
- If assistance were available up front, less Raleigh (i.e., central office) review time would be required.
- A guidance document is needed.
- It is often difficult to find out where to go for help even after contacting DEHNR.
- Competition instead of cooperation exists between organizations.
- The financial assistance programs may not benefit those who need them most.
- The program focuses on construction; therefore, non-construction alternatives may not be given sufficient consideration. This could result in negative environmental consequences.
- Departmental goals may not be included in ranking schemes.

Improved Public Relations

Some responded with suggestions intended to help DEHNR improve its public relations. Those suggestions are as follows:

- Implement a 24-hour telephone line for reporting violations.
- Establish an ombudsman to answer citizen questions.
- Develop a department code of conduct centered around being a public servant.
- Develop flow charts showing the schedule of different project permits by state, local and federal agencies.
- Public information position responsibilities should be broadened to include the public and not just the media.
- Improve mail service into and out of the department.

- A liaison office is needed to facilitate customer service and permitting. The office should be able to answer most general questions without referring the customer to the permitting agency.

- The public should participate more in the development of regulatory processes.

- Train employees on handling and release of information of interest to the public in order to avoid unnecessary delays.

Separation of Health from Environmental Department

- Some report that the environment is too important to have the secretary of DEHNR split his time with health issues. They suggest that health functions be split and moved from DEHNR to another department.

Combination of DEHNR with Wildlife Resources Commission

- Some say that the Wildlife Resources Commission should be brought back into DEHNR as an agency, rather than functioning as an independent commission.

Environment, Health & Natural Resources Seen as the "Enemy"

Several comments refer to DEHNR as the "enemy" of public groups. Some of those are as follows:

- Staff are too oriented to the applicant or regulated community in their thinking and process.

- There is insufficient opportunity for public input to the decision-making process.

- Community interests are usually ignored.

- Public concerns are broad, whereas agency action is fragmented.

- Rules and standards are written to benefit and be responsive to the polluter, not to the impacted public.

- Staff lacks the flexibility and inclination to look at the broader environmental picture.

- Public groups are frustrated with regulatory processes and do not view DEHNR staff as always helpful.

- Disagreements with the state often have to be taken to a legal level to gain a hearing before the system.

- Relations with individual sections and staff are good, but overall agency relationship is strained.

- Staff view public interest groups as "trouble-makers" and not a positive factor in decision making.

- Public interest groups operate on "bake sale" budget, whereas large polluters have many resources. Interest groups feel they have important contributions but no real mechanism for their input.

- Some clients do not see the need for much of the work DEHNR does, although many consultants are pleased with the work of DEHNR.

- DEHNR staff seem to think the public understands need and reason for the processes they are implementing, but the public doesn't understand.

- Many permit applicants don't understand DEHNR processes or why they take so long. DEHNR staff is seen as keeping them in the dark by not providing explanations.

EMPLOYEE THEMES

Many DEHNR employees were interviewed during the review process to develop the "is" and "should" maps. Their comments have been compiled and paraphrased under the following general topics or themes.

Department Organization

- The present organization has several specific management problems. Is reorganization necessary? Shouldn't there be more focus on improving communication, establishing clear authority lines, developing agency-wide policies on important program components -- i.e. enforcement, technical assistance, customer orientation, training, coordination between divisions/programs, etc., and just improving the basic way we do business?

- It seems that management individuals are too busy "doing" to assess carefully how their organizations are working. There are no internal processes in place to look at organizations, programs and individual offices.

- An overall view of the importance of individual positions and responsibilities is generally left up to the persons in those jobs. To improve service, efficiency, and effectiveness, each person in an organization should ideally help develop a clear mission statement and hear that mission supported from all levels of management. Management, supervision, and staff are often not on the same wavelength.

- The EPAT process is a destabilizing factor for some staff members. Some see it as an effort to weaken the impact of environmental programs on business, a "sell out" to special interest. EPAT was sometimes seen as endangering an individual's position or the program area in which he or she worked.

- Most staff in the regional office and some staff in the central office believe that the balance of personnel resources is too oriented at the central office. Those noting this concern recommend strong action to transfer more resources and authority to the regions.

- Clerical support staff in the regional offices are described by program staff as essential to the work of the agency. However, the current system of having those staff work for "administration" is seen by some as a serious impediment to effective use of those personnel resources. It was recommended that wherever possible support staff should be transferred to the programs they support.

- Other comments referred to the lack of clerical staff due to rotation of receptionist/switchboard positions. Other comments were directed toward the use of a word processing pool rather than assigned positions and its negative impact on knowledge of the program area being supported.

- Many of the health-related functions of the department are viewed as unrelated to the rest of DEHNR. On the other hand, several environmental health program areas are seen as being closely related to the department's environmental programs. It was recommended that those environmental health functions (i.e. public water supply, on-site wastewater management and shellfish sanitation) that most relate to DEHNR be retained in the department and that the more "pure" health functions be broken out from the department.

- Specific project knowledge was reported to be better at the regional level. For example, regional staff believe that all stormwater approval approvals should be moved to the regional level so that decisions are more timely and consistent.

Efficiency/Effectiveness

- Many employees believe that is too difficult to get budget revisions done. Divisions need more budget autonomy.

- In some agencies, employees contend that there is a lack of hard-working support staff (clerical/secretarial) .

- The hiring process needs streamlining. Permission is needed from division, department and state personnel to hire an applicant.

- There are too many signatures/sign-offs required for newsletters/contracts.

Technical Assistance

- The question of how much technical assistance should be given is a great concern. Some professional engineers in DEHNR are concerned about potential liability incurred from suggestions when they have no control over the application of those suggestions.

- Some believe that a lot of the public wants department employees to be their consultant and furnish considerable design data and plans. Even if time were not a factor, this "free" work could infringe upon services offered by consultants. The concern was expressed about which work should be dropped if departmental employees are to provide more technical support to customers.

- Under present and likely future staffing, DEHNR staff directly involved with the public in regulatory programs are too busy to provide enough up-front or ongoing customer service to prevent environmental problems. There are not enough central office staff that could be transferred to field offices to provide relief for this situation. Cross-training and re-deploying personnel from less busy programs to these busy programs could help, but commitment to the program by cross-trained individuals could then become an issue.

- The staff has a difficult time defining their responsibilities with respect to providing technical assistance to the public. The department has several levels of authority and organization concerning technical assistance. For example, DEM-WQ, DEM-Construction Grants, DEM Regional Office, and OWR all will provide some level of assistance in dealing with a wastewater treatment problem.

Training

- There are limited training opportunities. New staff are not effectively oriented to their position and existing staff are not consistent in dealing with similar matters. These are signs of lack of coordinated training within organizations.

- Department orientation is not useful and it is difficult to get new hires through the system. In general, DEHNR staff also need more training on the budget.

Fragmentation/Overlap in Responsibility

- The non-point source management program is described as being spread over too many agencies with no clear objective or direction provided to those agencies. Wastewater management is another program that appears to have overlaps. Some question why the department allows the management of wastewater and policies associated with this program to reside in so many divisions. Several question the split in drinking water issues between DEM and DEH. Lack of coordination was cited as a concern by all staff.

- Regional staff often believe that central staff review of regional recommendations is redundant and those reviews offer little value to the final decisions. The concern most often expressed was lack of timely action on public requests for agency decisions.

- Regional staff in DEM believe that some permitting functions that are currently managed through the central office can be streamlined, freeing resources to look at more critical agency decisions. Sewer and water line approvals (DEH Public Water Supply) were noted as specific permitting areas where general permits with specific design standards could replace the need to look at every set of plans (<5% overview to ensure consultants are following the design standard). This concept is related to a general assessment of agency priorities/resources and deciding what can be managed in a more effective manner.

- Wastewater management was mentioned several times. Many believe it makes no sense to have one agency (DEH) in control of wastewater disposal under the surface of the soil and another agency (DEM) responsible if the same wastewater is applied to the surface of the soil. Public groups also question this split in decision making.

Coordination

- Stormwater technical aspects between construction review (Land Quality) and operational impact review from stormwater runoff (DEM) appear to be the same. Some suggest that these functions be merged. The state stormwater review process in the coastal area is seen as working pretty well by some in both DEM and Land Quality. Others report there is little contact and coordination between the groups. A similar issue was reported on NPDES permits.

- If a DEM-issued federal storm water discharge permit (NPDES) is required for a particular construction project along with a Land Quality Sediment and Erosion Control approval, there is no mechanism to ensure that a project developer secures the NPDES permit after obtaining approval from Land Quality. Land Quality doesn't notify DEM of its project approvals but does provide the applicant with a DEM NPDES application. It was suggested that DEM's construction NPDES program be combined in a program so that the applicant would always secure all the necessary permits before final departmental approval is issued. Likewise, some reported that permitting for stormwater, sediment and erosion control, and Coastal Area Management Act (CAMA) development could be combined.

- Mining permit activity usually involves Land Quality, DEM-Water Quality, DEM-Air Quality and, often, DEM-Groundwater. It was suggested that all departmental involvement on a particular mining site be handled through one division. Such a system could reduce conflict and confusion on the part of the permit applicant and the individual agencies.

- Several reported that the separation between DEM and DEH on protecting drinking water is artificial and causes problems in dealing with the public. DEM's watershed protection program has direct and important implications for DEH's approval of raw water intakes and water systems, but there are no apparent efforts to coordinate policy development views between the two agencies. Coordination of disagreements between the agencies can be resolved only at the deputy secretary or secretary levels.
- Routing documents between agencies for comment takes too long. Perhaps priority should be established for interagency reviews, including established comment times. Also, decisions should be made on documents that will no longer be routed for comment. Groups often get a letter requesting comments after the due date because of inadequate review time allowed for comments or slow routing.
- Much of the expertise in environmental programs is under utilized by other agencies. No agency can afford to share valuable employee resources with other agencies, but the department should seek ways to make it more "culturally correct" to loan out this expertise.
- There is a lack of communication from the executive staff to the lower levels on DEHNR activities.
- DEM was viewed by some other agencies as being mostly interested in empire building rather than working with others. Several specific comments were, "DEM doesn't use DCM's wetlands work", and "It is difficult to get answers from DEM, which slows down the permit process."

Lack of Consistency

- There appears to be significant variation within agencies in dealing with specific program components. Depending on which agency customers go to or which office (regional, central, etc.), they may receive a totally different reception in different parts of the state.
- The difference in review timing between Land Quality (30 days), DEM (90 days) and Coastal Management (described as

up to 6 months by one reviewer, although the agency's average is two days for general permits and 72 days for major permits) causes customer relationship problems and makes it difficult for a project developer to follow individual agency requirements. The coordination of the time to review projects is a critical need for the department.

Timeliness

- Agency decision-making is often described as slow and unnecessarily complex. There needs to be more delegation of authority within agencies so decisions are more timely. Enforcement action should be streamlined so that it occurs reasonably soon after the violation(s). There is simply too much review of individual agency actions. Many actions require several levels of review and a lot of paper work moves from desk to desk.

One Stop Permitting

- Several staff like the concept of "one stop permitting," but can't always see how it could work under the existing organizational structure. A strong concern expressed is that "one stop permitting" should not create an additional layer of bureaucracy in the process.

- Another strong suggestion is for a 1-800 number for the public to find out what approvals are required by DEHNR. This would have to be staffed by individuals generally familiar with all the program approvals and processes in the department and with ready access to agency experts to answer questions. The 1-800 office could send out regulations, applications and general information on a "cost" basis and provide an E-mail or other notification to the DEHNR regional office in the area where the project is planned.

Customers

- Customer needs have never been defined to staff by training or at the manager/supervisor level. Some staff have no clear view of who their customers are or how to deal with them.

Total Quality Management

- The staff read about the governor's interest in Total Quality Management (TQM), but don't hear much about it from agency heads and other management/supervision types. If TQM is to be implemented, the process should be familiar to employees at all levels.

APPENDIX C

PROCESS MAPS

The EPAT drew process maps for five processes as part of their preparation for developing conceptual structural scenarios. The processes chosen included:

- Wastewater disposal
- 401 certifications
- Nonpoint source construction and development projects
- Groundwater clean-up
- Public water supply wells

Process maps identify the key actors, the major steps, and the decisions that constitute the current process for accomplishing the activity. Although there are variations in the ways that all processes happen, these maps attempt to describe the most common paths through the process.

These process maps are working documents for the purpose of identifying responsibilities and work flow in the current system, and helped the EPAT to find potential areas of duplication, missed connections, and inefficiencies.

Guidelines for reading process maps

- Maps are divided into horizontal bands that represent the "territory" of the organizational unit or group named in the band. Activities within in a band are the responsibility of the named group.

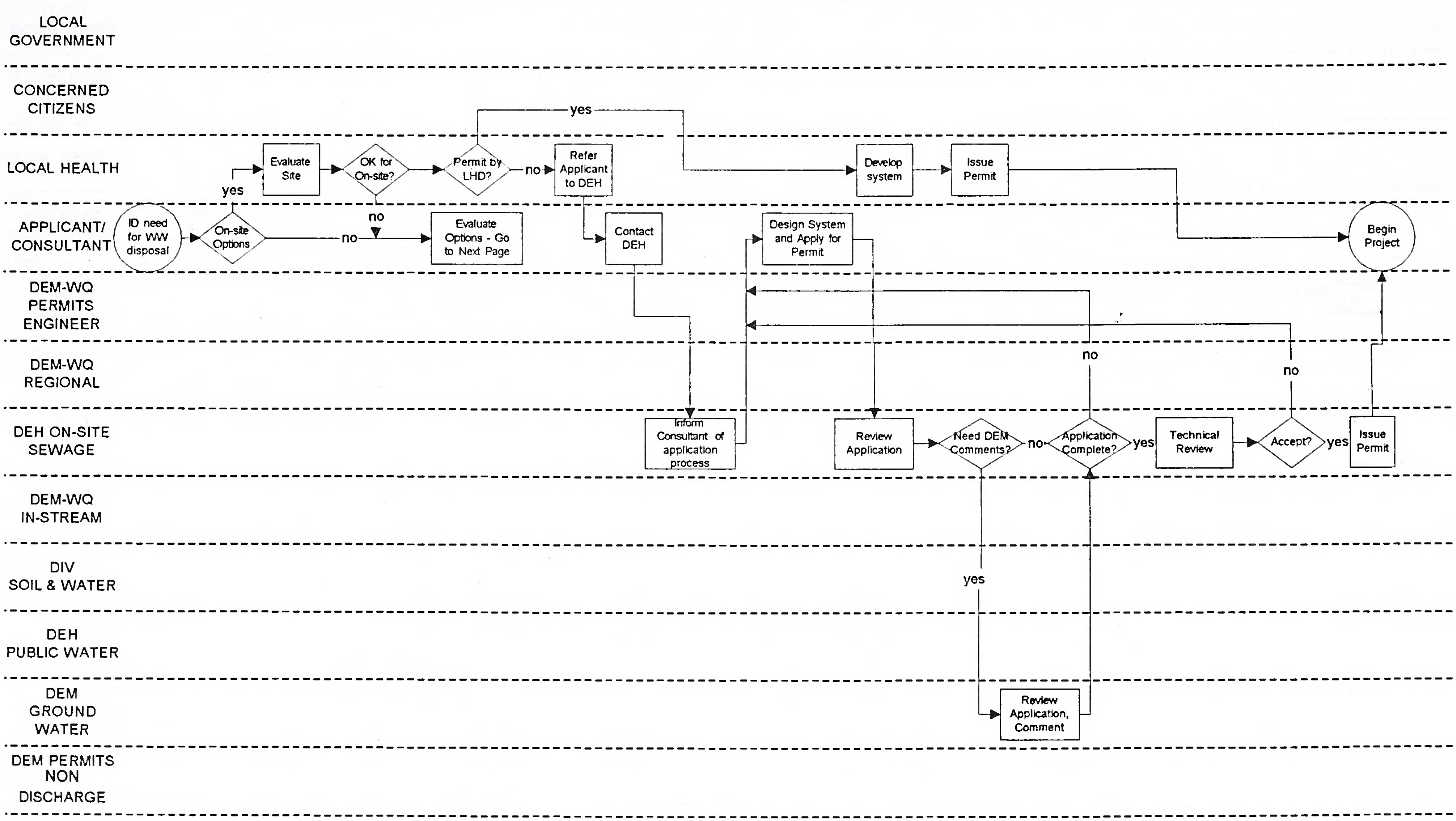
- Maps are organized so that events move from left to right as they are accomplished.

- Process maps have three symbols:

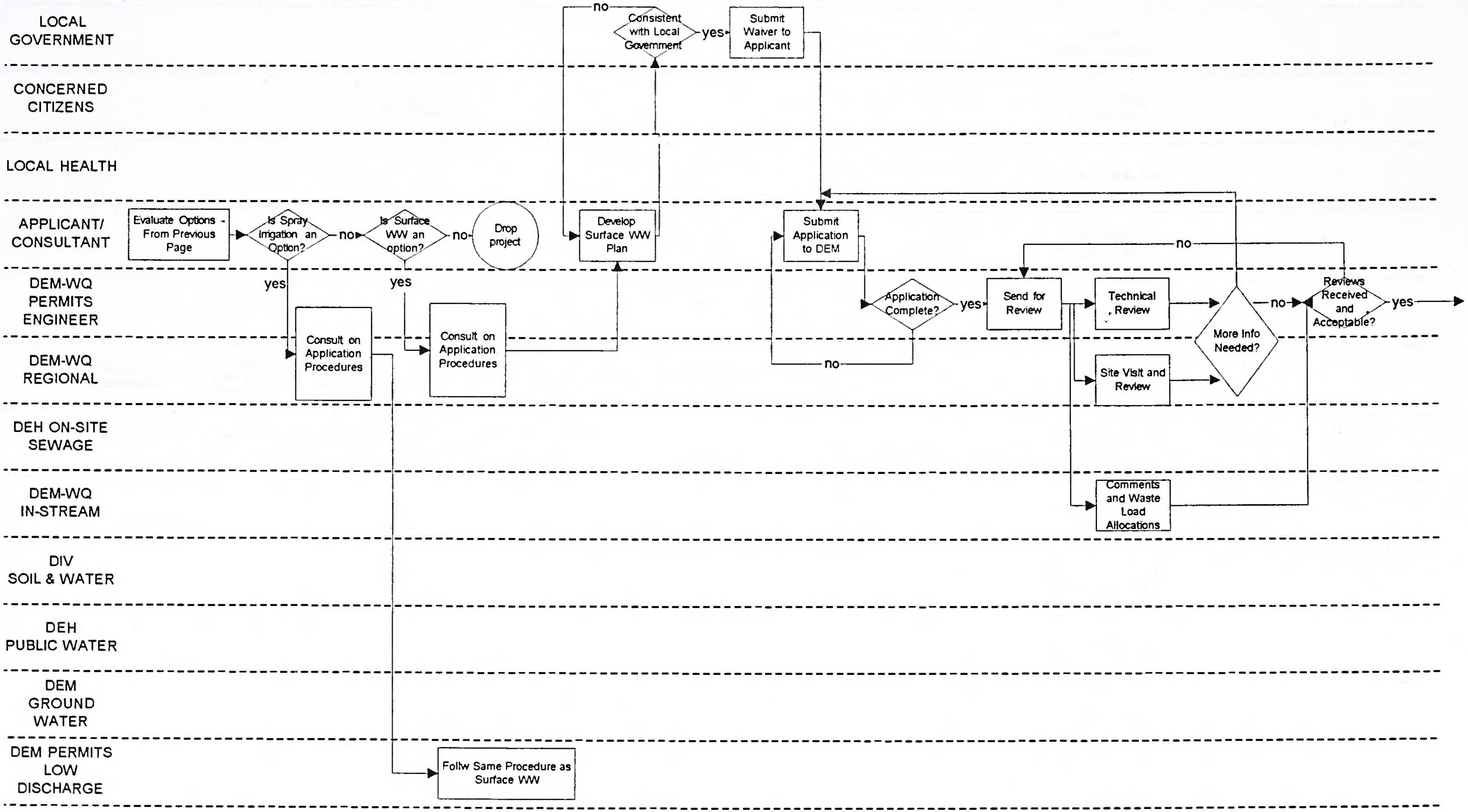
  - circle - beginning and end of processes
  - rectangle - activity (can include several processes)
  - diamond - decision with at least two choices

- Arrows connect and show the direction of the activity.

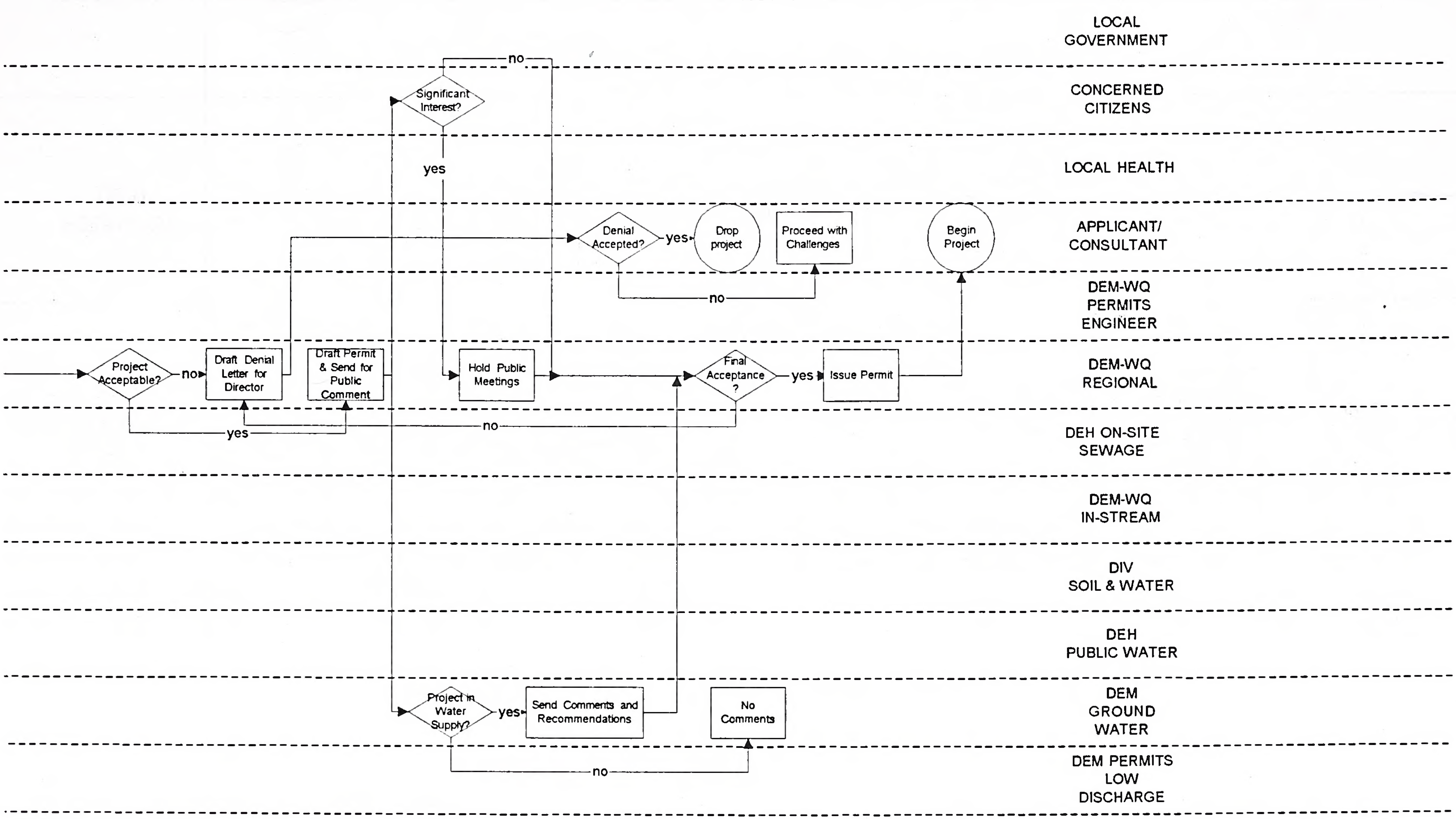
WASTE WATER PROCESS (Sub-Surface Options)



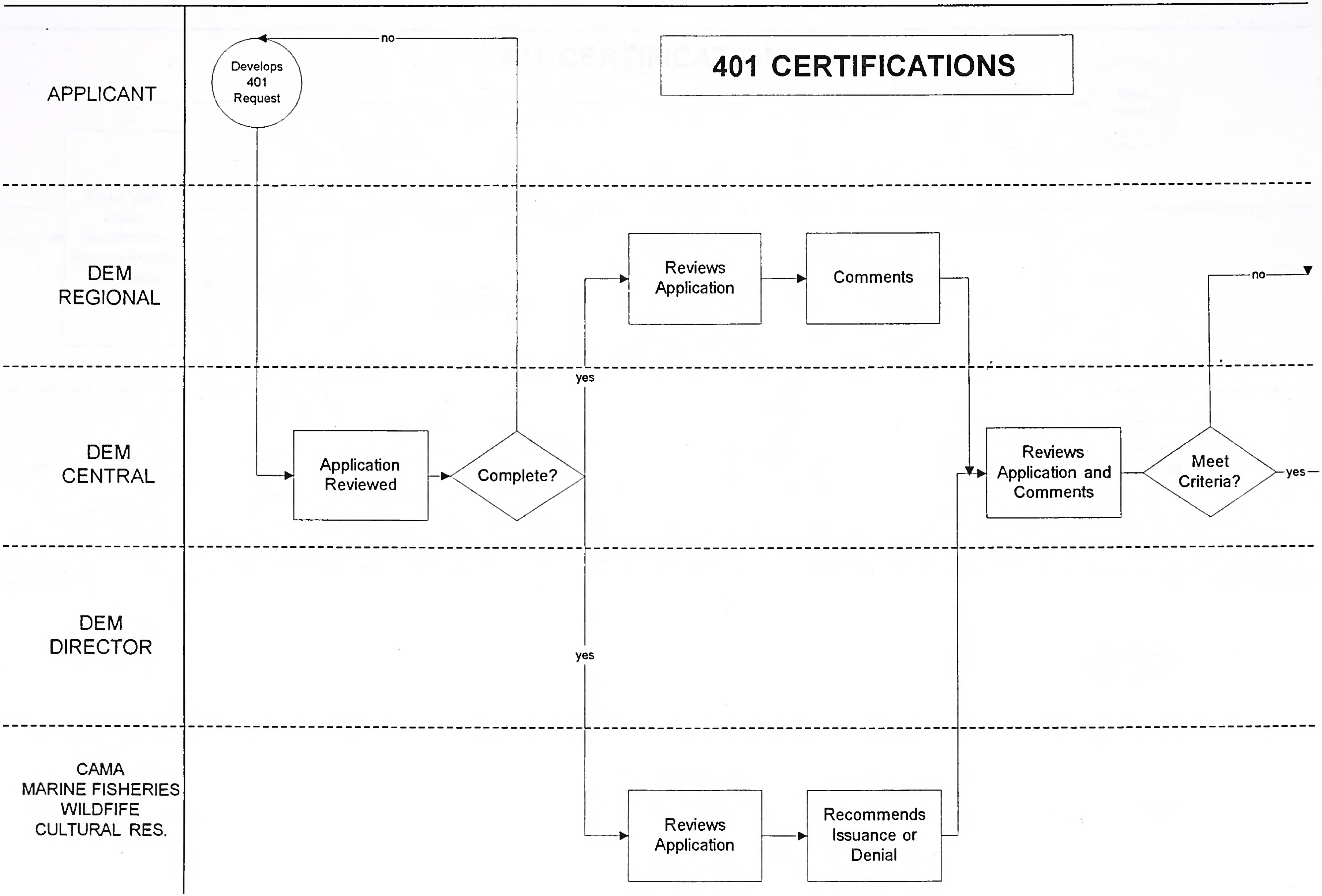
WASTE WATER PROCESS (Spray Irrigation and Surface WW Options) (page2)



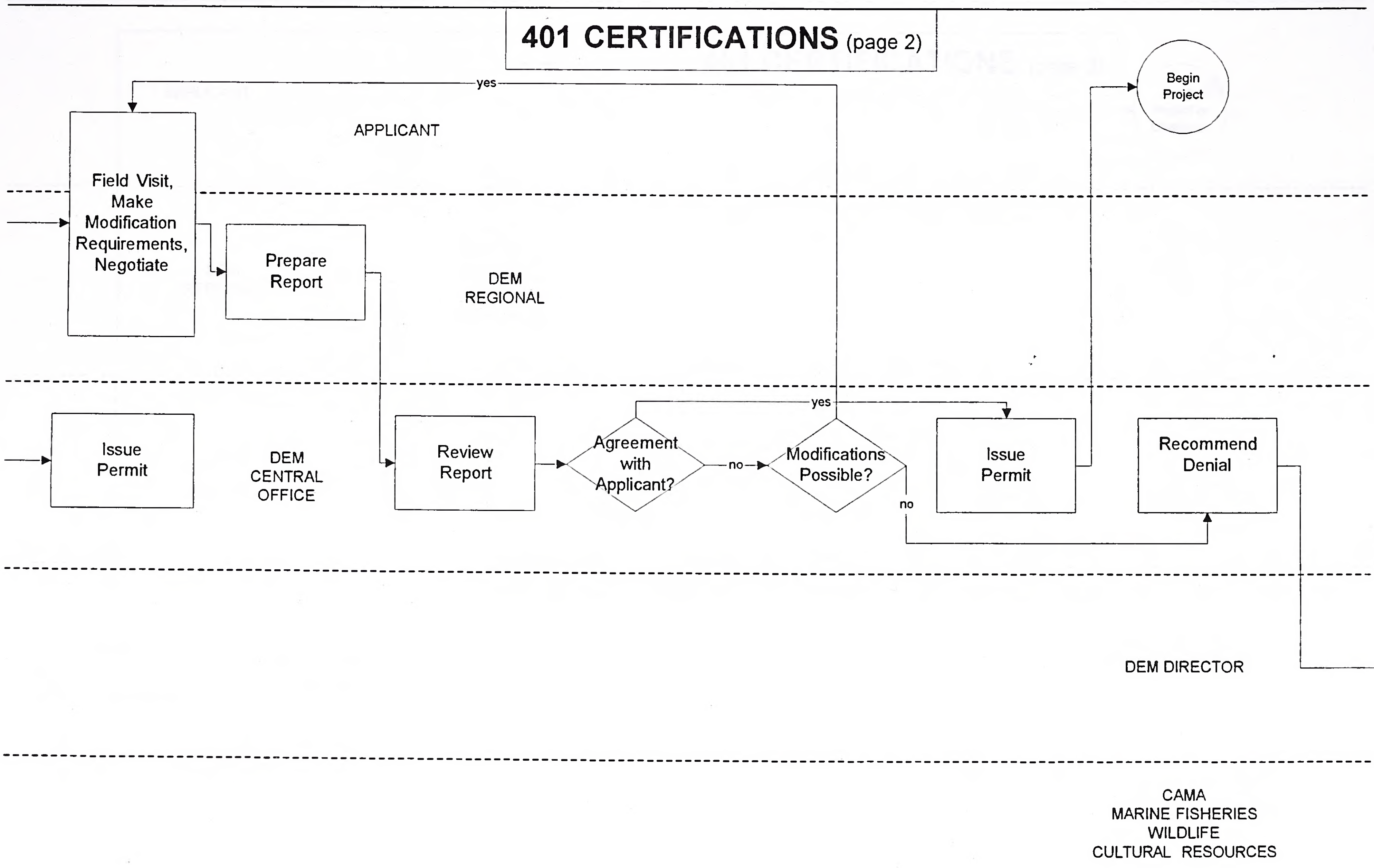
WASTE WATER PROCESS (Spray Irrigation and Surface WW Options - Cont.) (page 3)



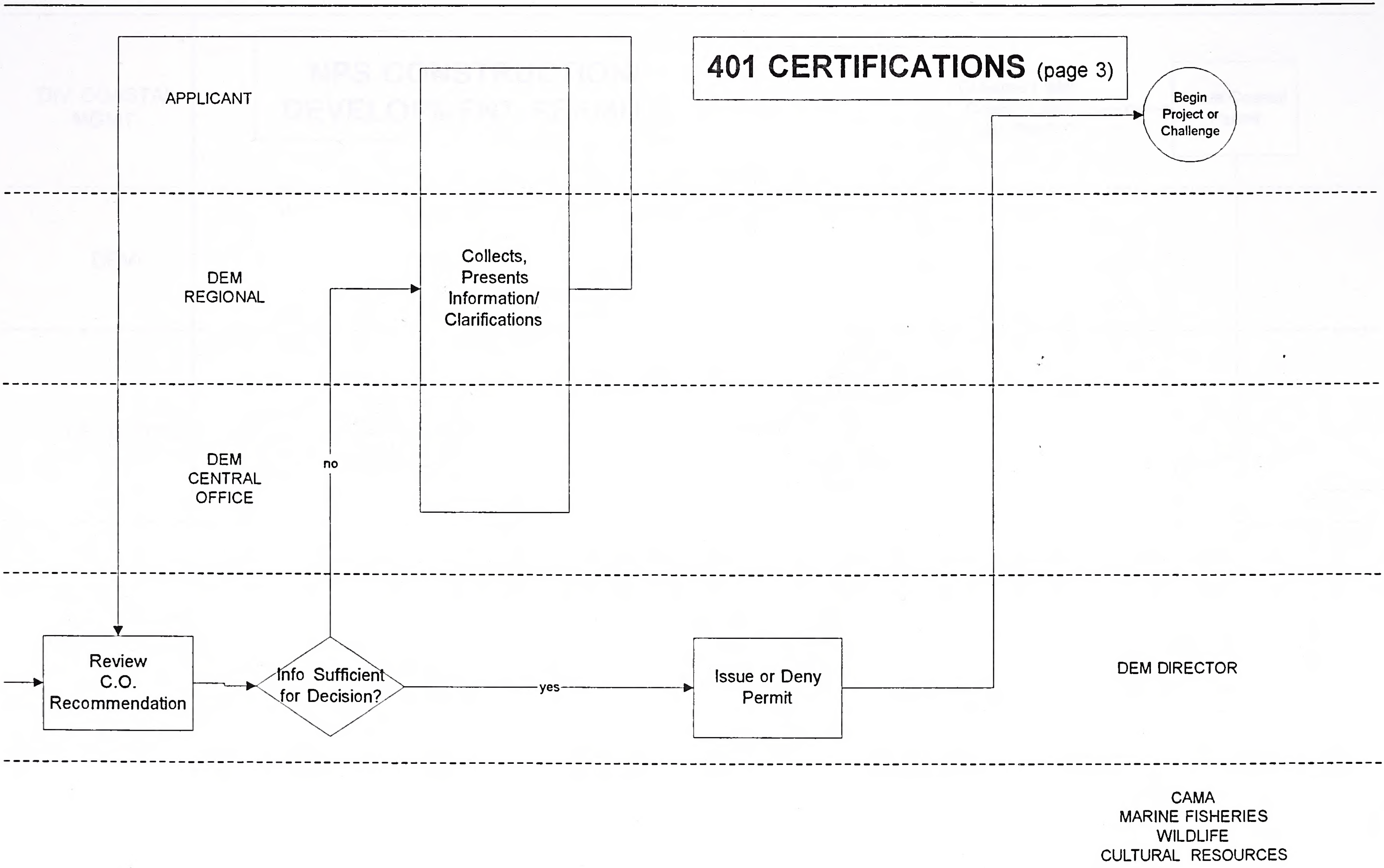
401 CERTIFICATIONS



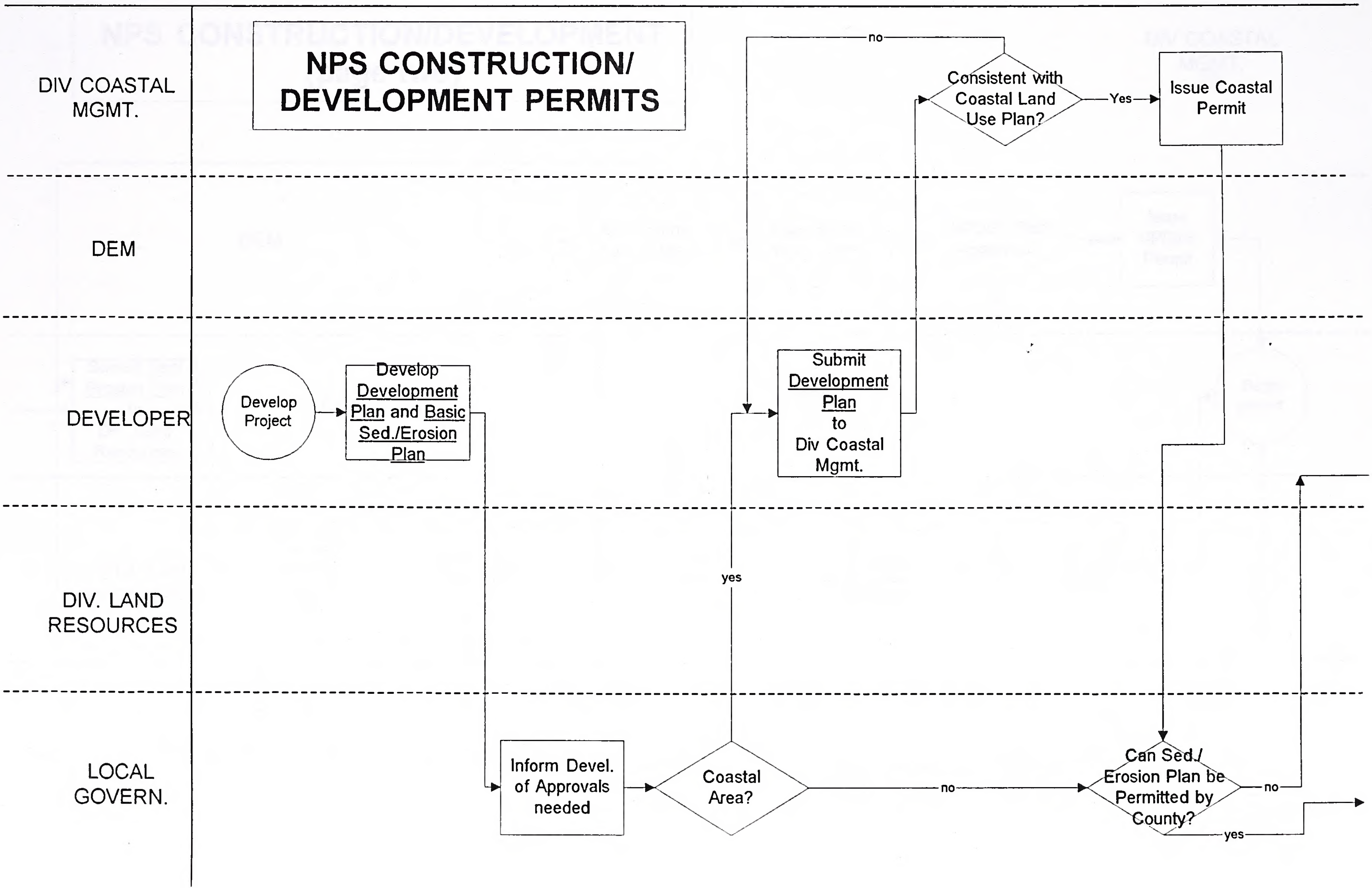
401 CERTIFICATIONS (page 2)



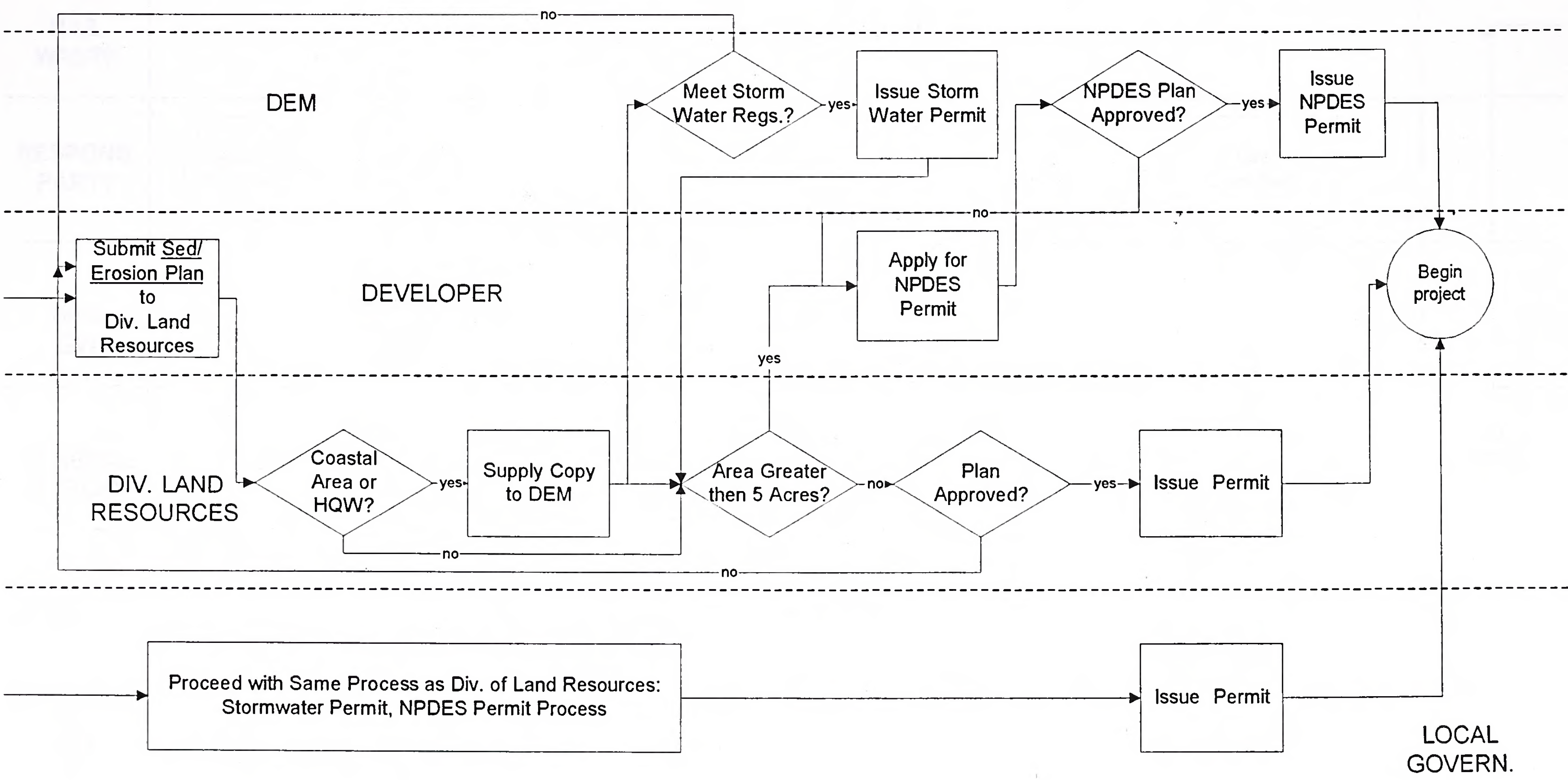
401 CERTIFICATIONS (page 3)


APPLICANT
DEM REGIONAL
DEM CENTRAL OFFICE
DEM DIRECTOR
CAMA
MARINE FISHERIES
WILDLIFE
CULTURAL RESOURCES
Collects, Presents Information/ Clarifications
Begin Project or Challenge
Review C.O. Recommendation
Info Sufficient for Decision?
no
yes
Issue or Deny Permit

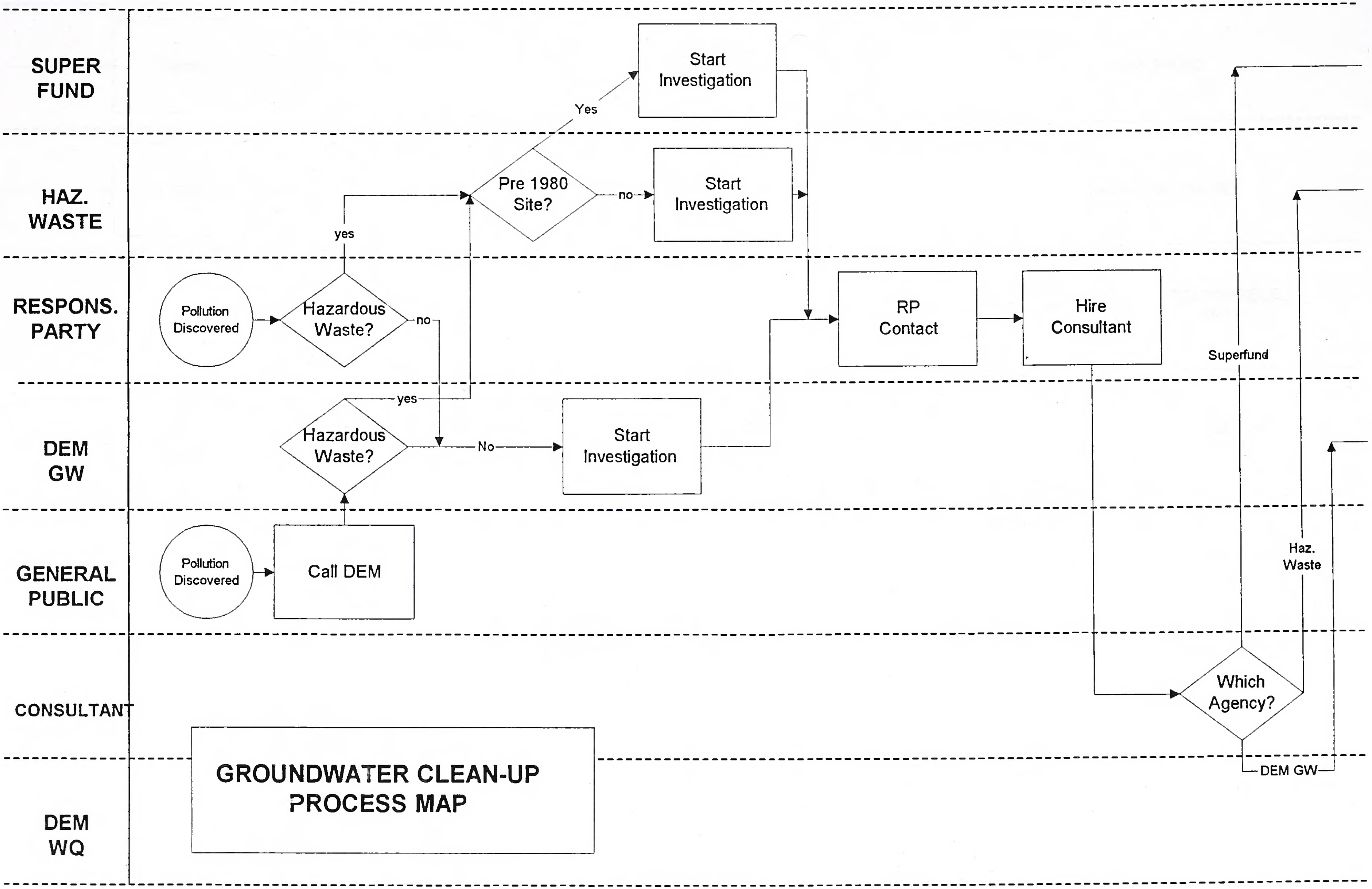
NPS CONSTRUCTION/ DEVELOPMENT PERMITS

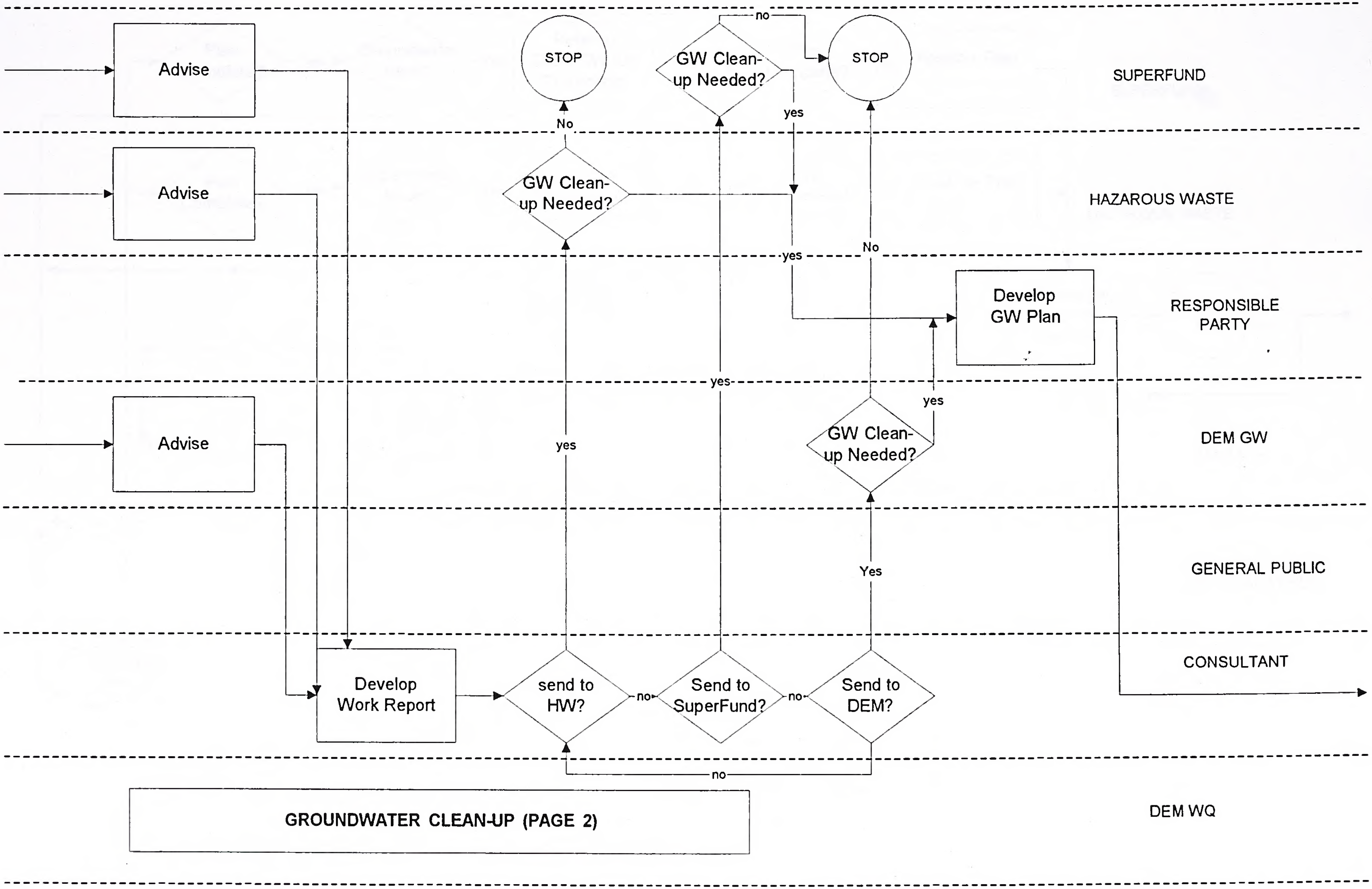

DIV COASTAL MGMT.
DEM
DEVELOPER
DIV. LAND RESOURCES
LOCAL GOVERN.
Develop Project
Develop Development Plan and Basic Sed./Erosion Plan
Inform Devel. of Approvals needed
Coastal Area?
yes
no
Submit Development Plan to Div Coastal Mgmt.
Consistent with Coastal Land Use Plan?
no
Yes
Issue Coastal Permit
Can Sed./ Erosion Plan be Permitted by County?
no
yes

NPS CONSTRUCTION/DEVELOPMENT
(page two)

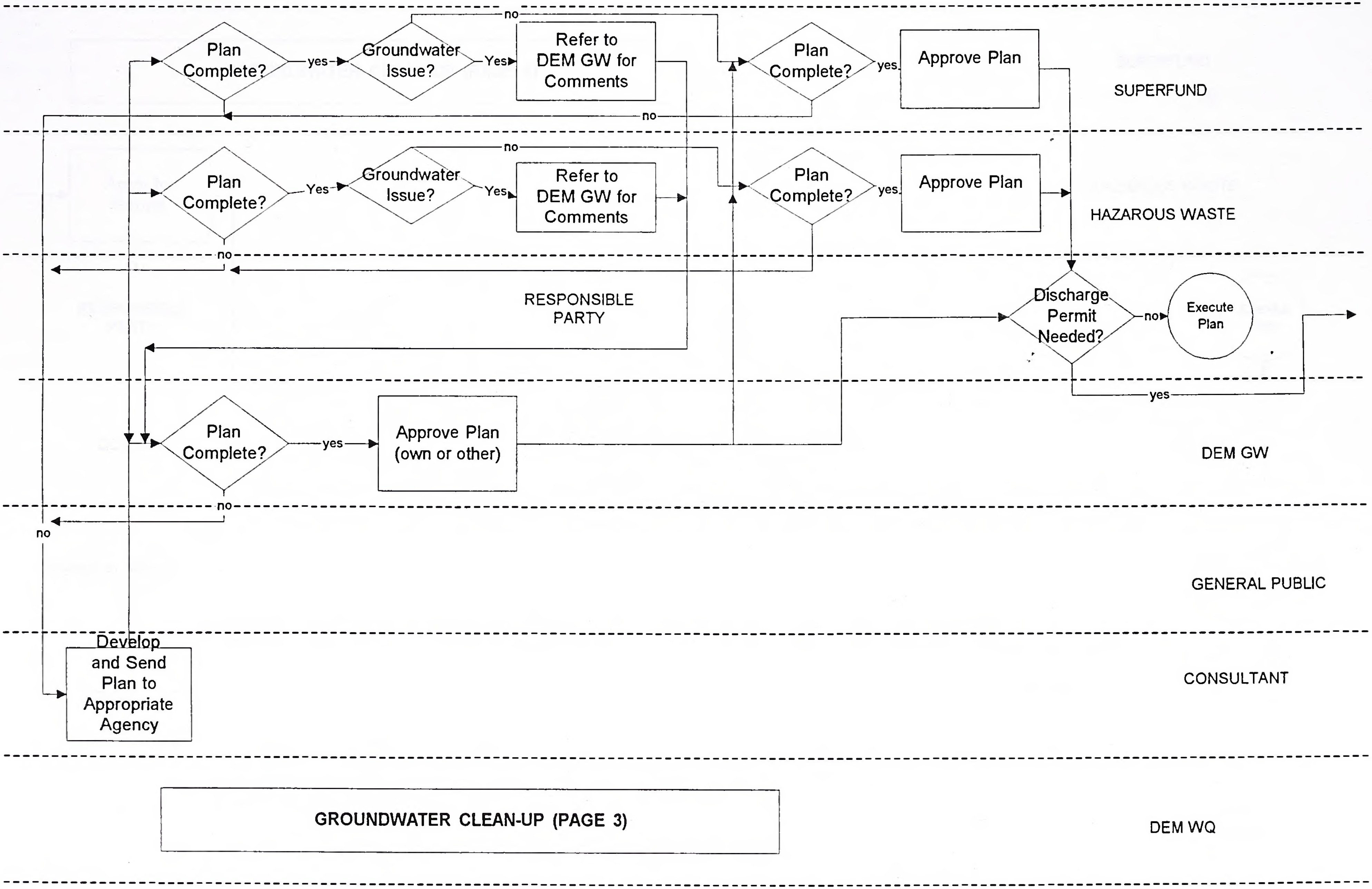


GROUNDWATER CLEAN-UP PROCESS MAP



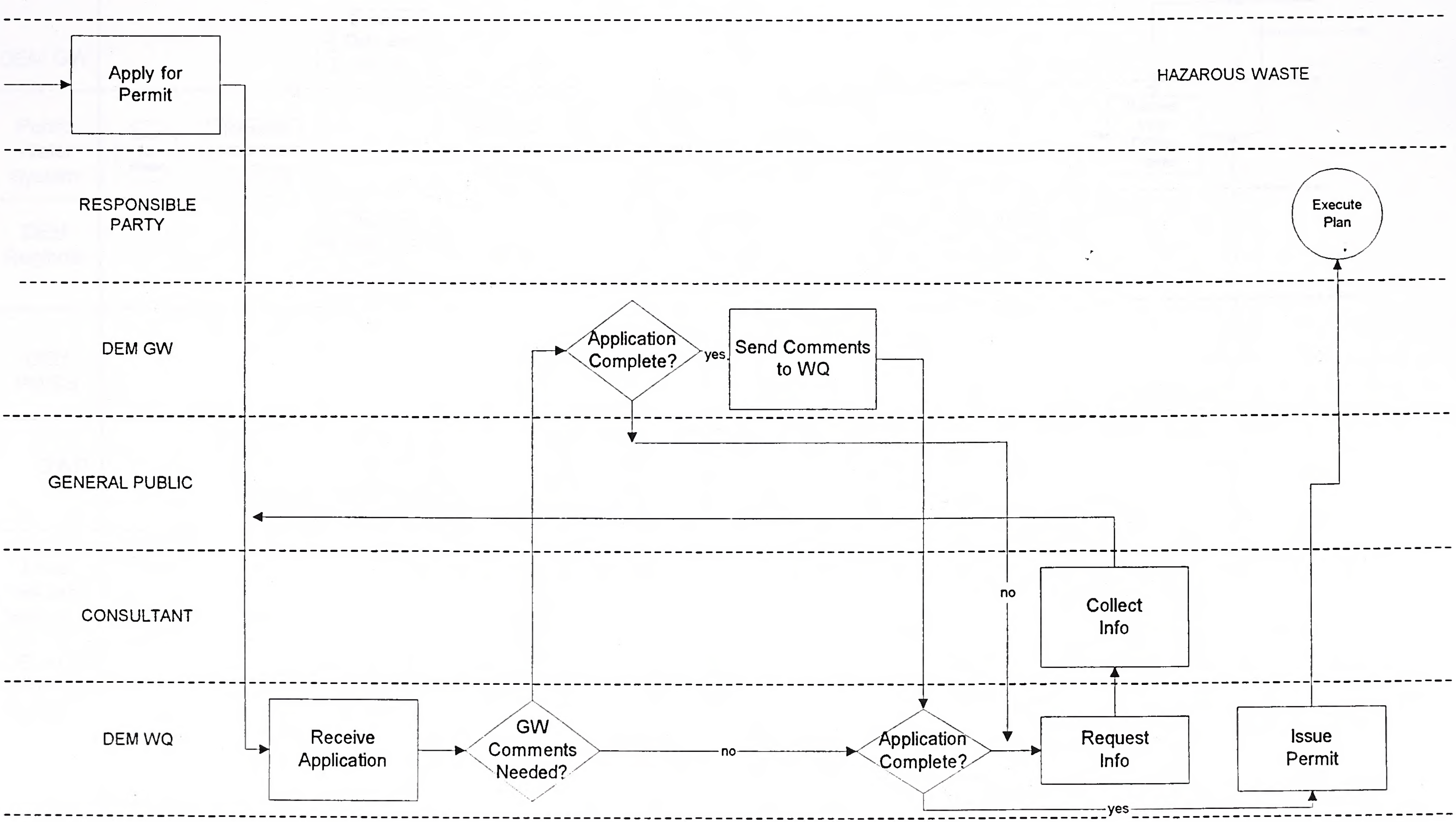


GROUNDWATER CLEAN-UP (PAGE 2)

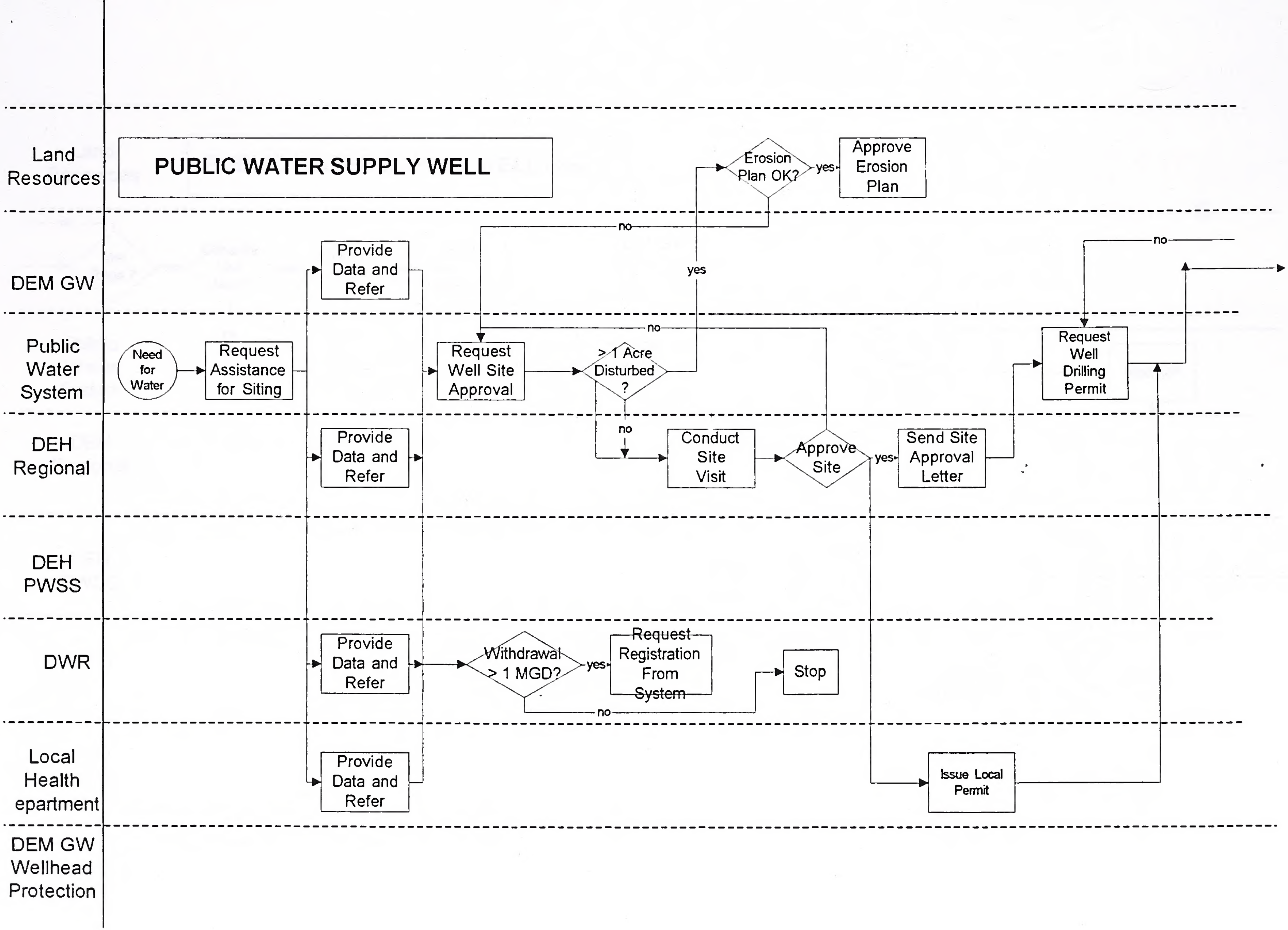


GROUNDWATER CLEAN-UP (PAGE 3)

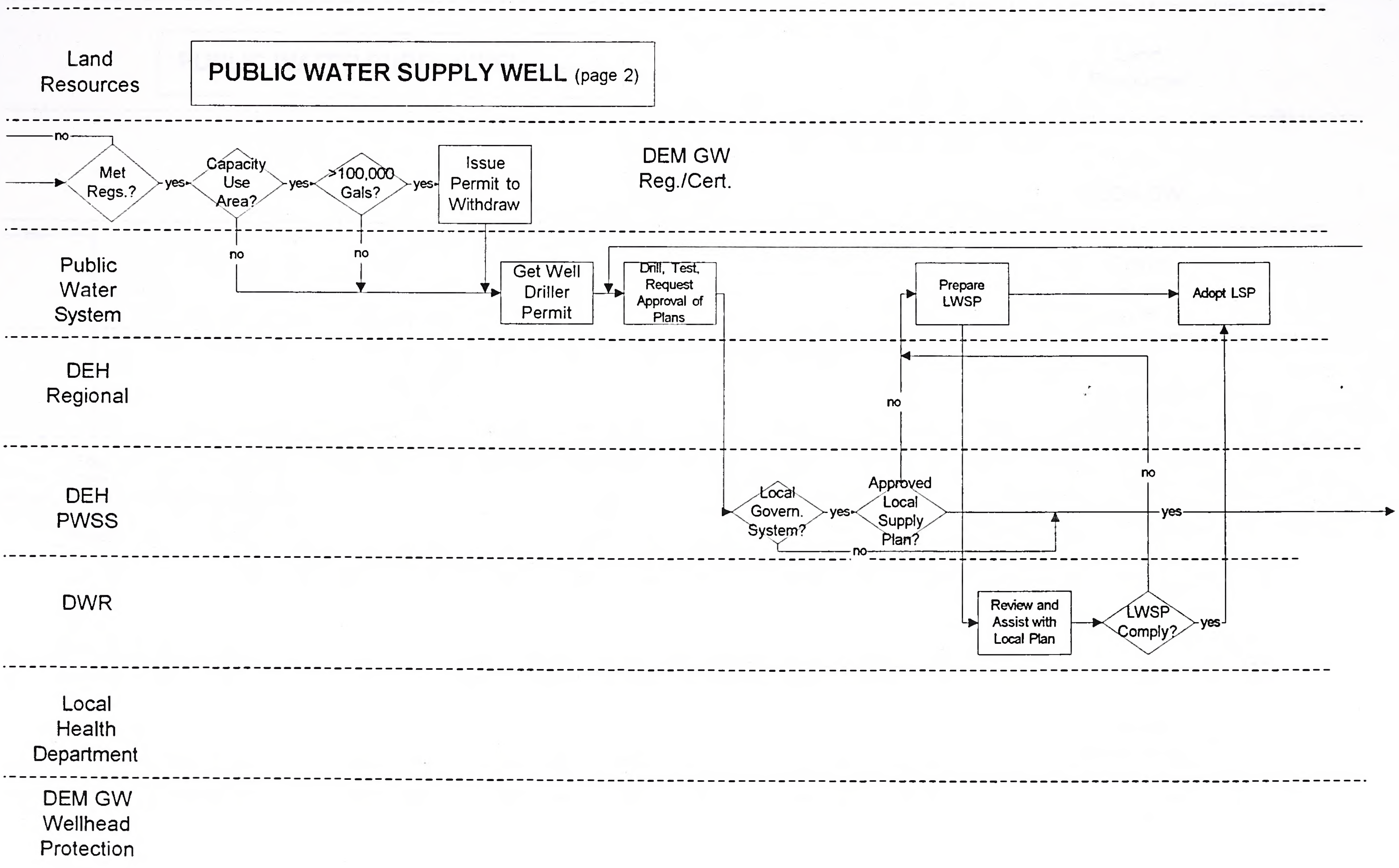
GROUNDWATER CLEAN-UP (PAGE 4)



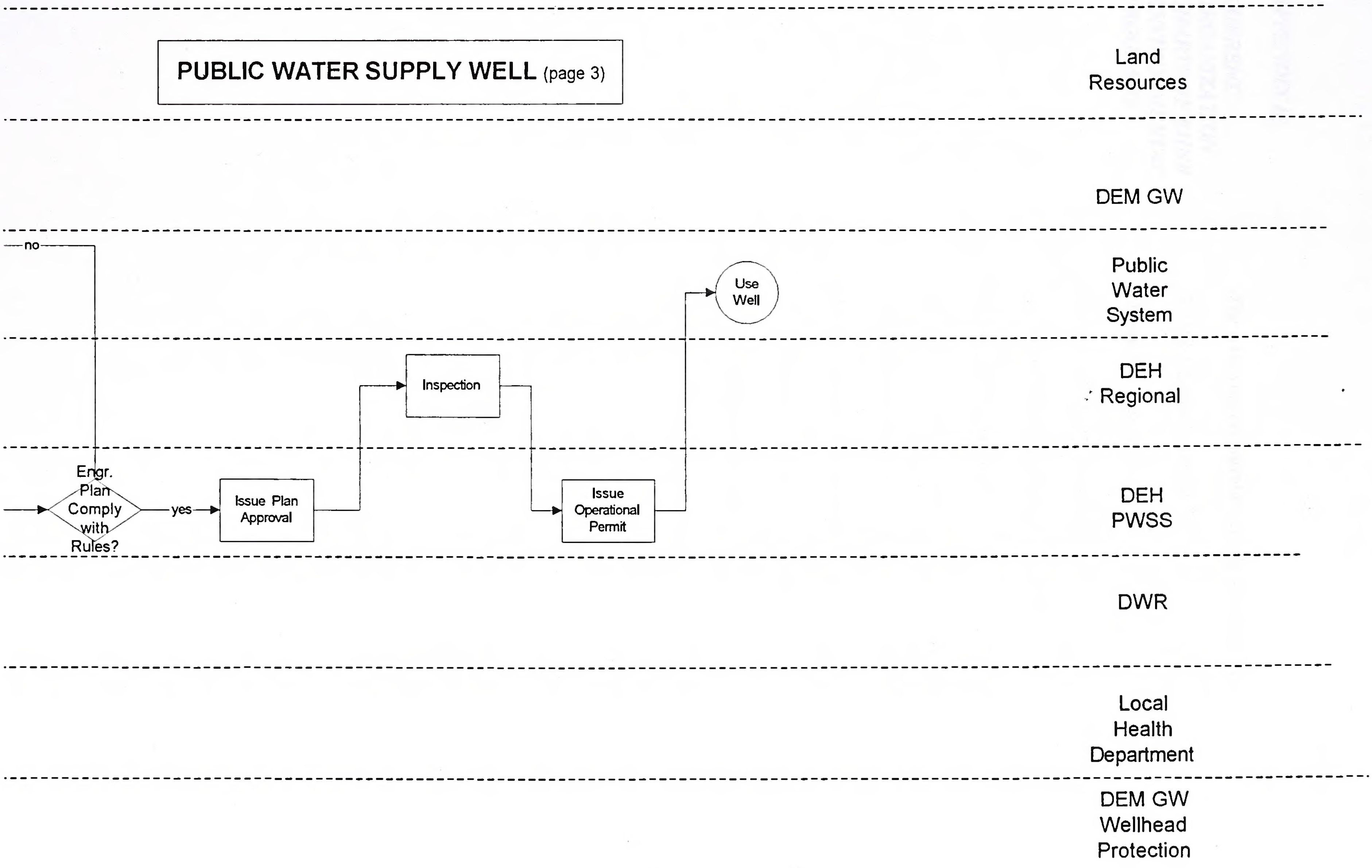
PUBLIC WATER SUPPLY WELL



PUBLIC WATER SUPPLY WELL (page 2)



PUBLIC WATER SUPPLY WELL (page 3)



APPENDIX D

CURRENT ORGANIZATION CHARTS OF EHNR ENVIRONMENTAL PROGRAMS

The following organization charts are attached:

EHNR Administration & Divisions

Division of Coastal Resources

Division of Environmental Health

Division of Environmental Management

Division of Forest Resources

Division of Land Resources

Division of Radiation Protection

Division of Soil & Water Conservation

Division of Solid Waste Management

Office of Waste Reduction

Division of Water Resources

Department of Environment, Health, & Natural Resources

Organization Chart

- SECRETARY Jonathan B. Howes
- DEPUTY SECRETARY Steven J. Levitas

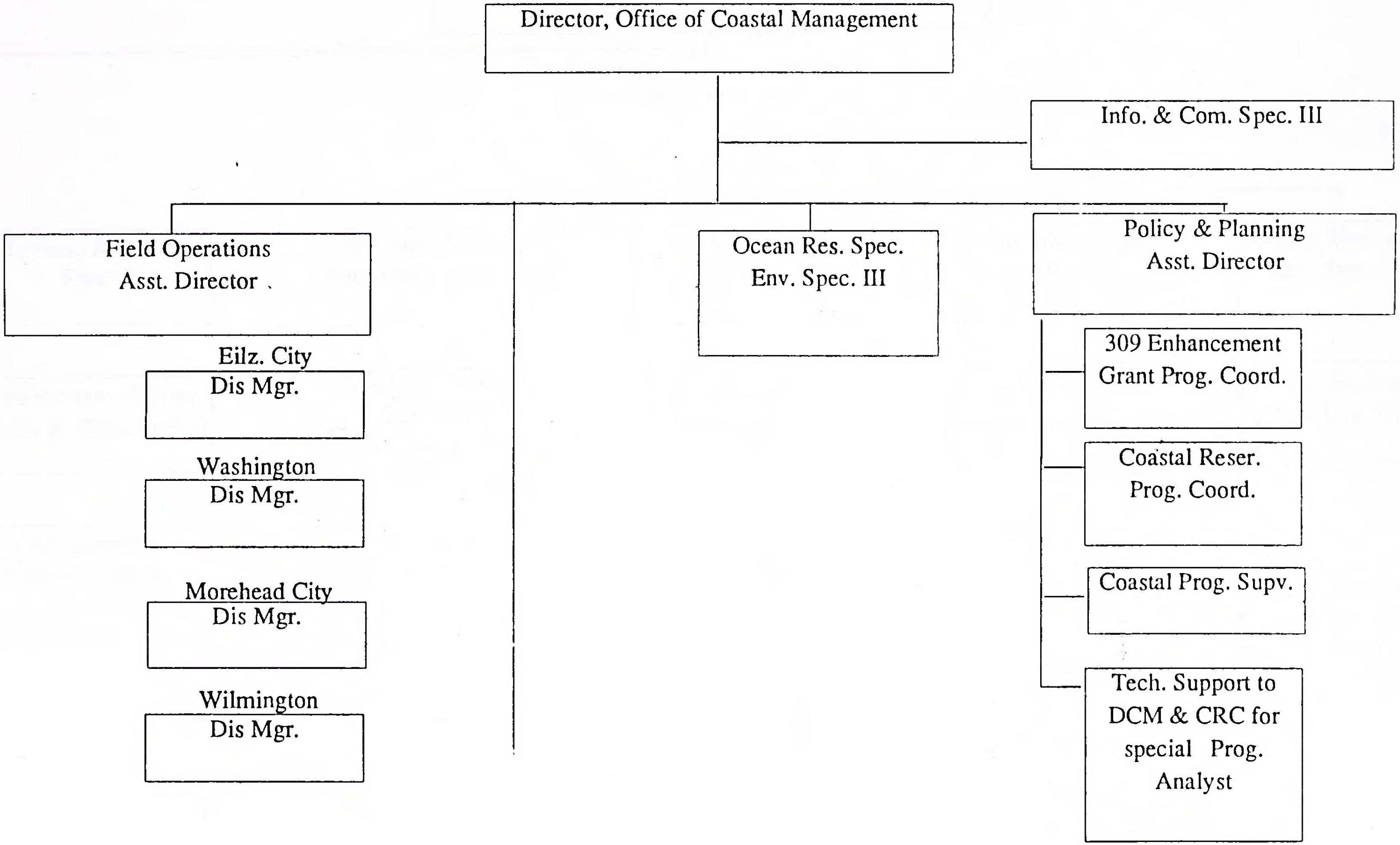
Wildlife Resources
Charles Fullwood

- Environ. Education — Anne Taylor
- Equal Employment Opportunity — Sandra Washington
- General Counsel — Richard B. Whisnant
- Legislative Affairs — Henry Lancaster
- Public Affairs — Debbie Crane

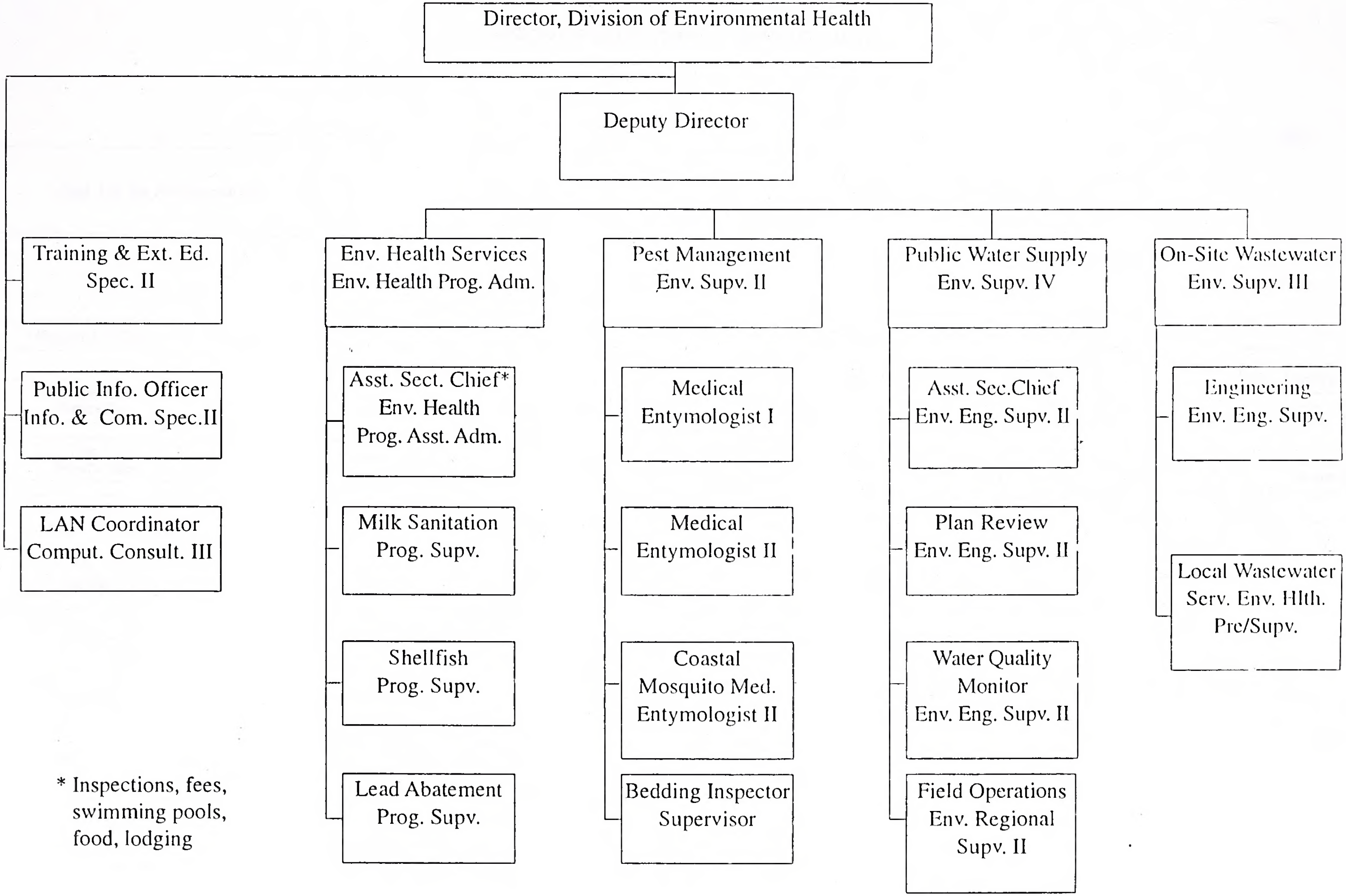
- **Assistant Secretary Environmental Protection — Linda Bray Rimer**
  - Coastal Management — Roger Schecter
  - Environmental Mgmt. — Preston Howard
  - Land Resources — Charles Gardner
  - Radiation Protection — Dayne Brown
  - Solid Waste Mgmt. — Bill Meyer
  - Waste Reduction — Gary Hunt
  - Water Resources — John Morris
- **Assistant Secretary Health and State Health Director — Dr. Ronald Levine**
  - Deputy State Health Director — (vacant)
    - Adult Health Promotion — Dr. Dale Simmons
    - Dental Health — Dr. Jean Spratt
    - Epidemiology — (vacant)
    - Maternal-Child Health — Dr. Ann Wolfe
    - Minority Health — Barbara Pullen-Smith
    - Public Health Nursing — (vacant)
  - Deputy State Health Director — Chris Hoke
    - Environmental Health — (vacant)
    - Health & Environ. Stat. — Delton Atkinson
    - Health Education — Amin Khalil
    - Laboratory Services — Dr. Samuel Merritt
    - Post Mortem Medicolegal Examination — Dr. John Butts
    - Local Health Services — (vacant)
- **Assistant Secretary Natural Resources — Joan L. Weld**
  - Aquariums — Dr. Ned Smith
  - Forest Resources — Stan Adams
  - Marine Fisheries — Bruce Freeman
  - Museum of Natural Sciences — Dr. Betsy Bennett
  - Parks & Recreation — Dr. Phil McKnelly
  - Soil & Water Conservation — Dewey Botts
  - Zoological Park — Dr. David Jones
- **Assistant Secretary Administration — R. Lois Artis**
  - Budget, Planning & Analysis — (vacant)
  - Computer Systems — (vacant)
  - Fiscal Management — Greg Wilshusen
  - General Services — Laird Davison
  - Personnel — Ann Cobb
  - Regional Managers
    - Asheville — Nann Guthrie
    - Fayetteville — Andy McCall
    - Mooresville — Diane Long
    - Raleigh — Boyce Hudson
    - Washington — Nancy Smith
    - Wilmington — Bob Jamieson
    - Winston-Salem — Leesha Fuller

2/95

DIVISION OF COASTAL MANAGEMENT

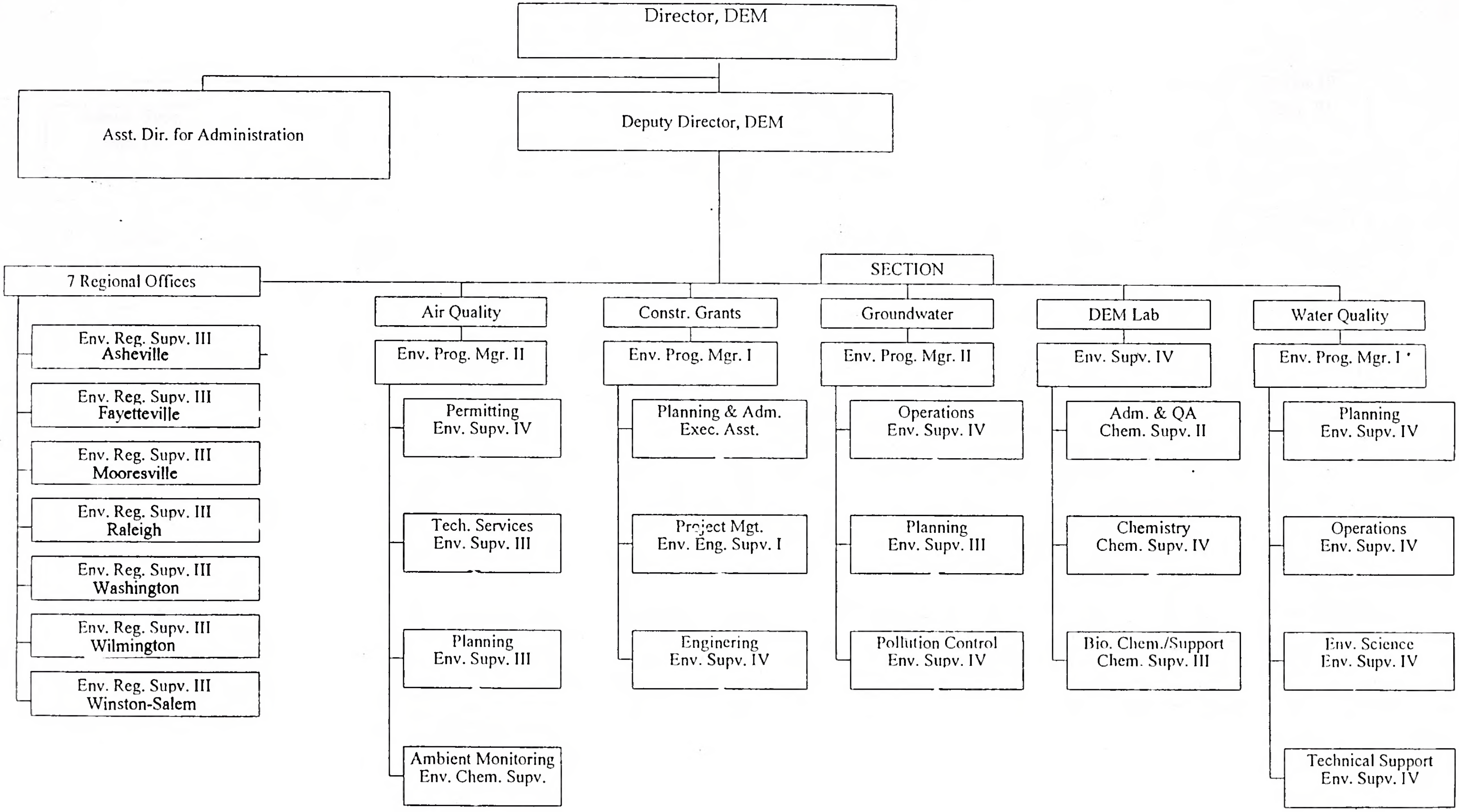

Director, Office of Coastal Management
Info. & Com. Spec. III
Field Operations Asst. Director .
Ocean Res. Spec. Env. Spec. III
Policy & Planning Asst. Director
Eilz. City Dis Mgr.
Washington Dis Mgr.
Morehead City Dis Mgr.
Wilmington Dis Mgr.
309 Enhancement Grant Prog. Coord.
Coastal Reser. Prog. Coord.
Coastal Prog. Supv.
Tech. Support to DCM & CRC for special Prog. Analyst

DIVISION OF ENVIRONMENTAL HEALTH

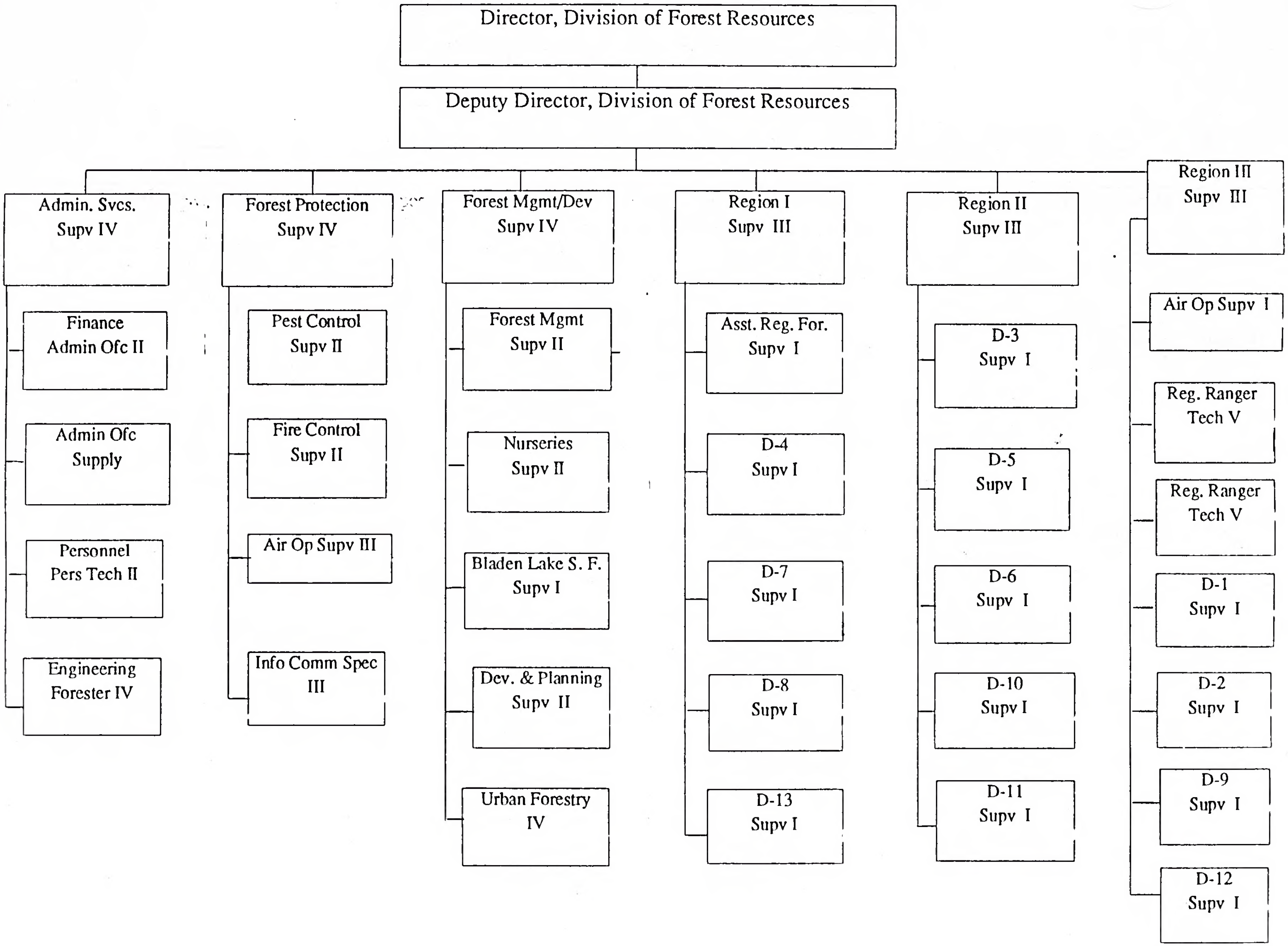

Director, Division of Environmental Health
Deputy Director
Training & Ext. Ed. Spec. II
Public Info. Officer Info. & Com. Spec.II
LAN Coordinator Comput. Consult. III
Env. Health Services Env. Health Prog. Adm.
Asst. Sect. Chief* Env. Health Prog. Asst. Adm.
Milk Sanitation Prog. Supv.
Shellfish Prog. Supv.
Lead Abatement Prog. Supv.
Pest Management Env. Supv. II
Medical Entymologist I
Medical Entymologist II
Coastal Mosquito Med. Entymologist II
Bedding Inspector Supervisor
Public Water Supply Env. Supv. IV
Asst. Sec.Chief Env. Eng. Supv. II
Plan Review Env. Eng. Supv. II
Water Quality Monitor Env. Eng. Supv. II
Field Operations Env. Regional Supv. II
On-Site Wastewater Env. Supv. III
Engineering Env. Eng. Supv.
Local Wastewater Serv. Env. Hlth. Pre/Supv.

* Inspections, fees,
swimming pools,
food, lodging

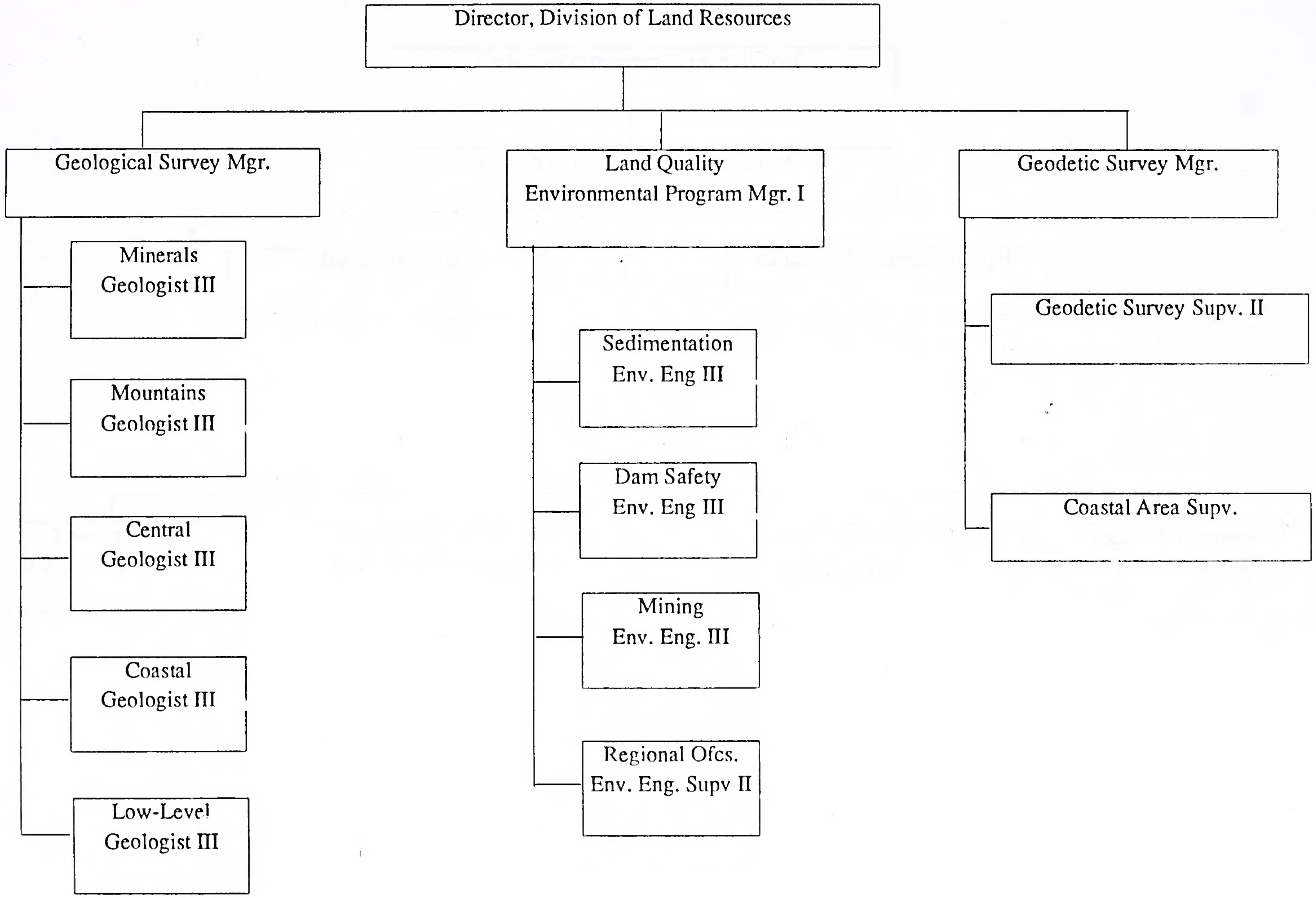
DIVISION OF ENVIROMENTAL MANAGEMENT


Director, DEM
Asst. Dir. for Administration
Deputy Director, DEM
SECTION
7 Regional Offices
Env. Reg. Supv. III Asheville
Env. Reg. Supv. III Fayetteville
Env. Reg. Supv. III Mooresville
Env. Reg. Supv. III Raleigh
Env. Reg. Supv. III Washington
Env. Reg. Supv. III Wilmington
Env. Reg. Supv. III Winston-Salem
Air Quality
Env. Prog. Mgr. II
Permitting Env. Supv. IV
Tech. Services Env. Supv. III
Planning Env. Supv. III
Ambient Monitoring Env. Chem. Supv.
Constr. Grants
Env. Prog. Mgr. I
Planning & Adm. Exec. Asst.
Project Mgt. Env. Eng. Supv. I
Engineering Env. Supv. IV
Groundwater
Env. Prog. Mgr. II
Operations Env. Supv. IV
Planning Env. Supv. III
Pollution Control Env. Supv. IV
DEM Lab
Env. Supv. IV
Adm. & QA Chem. Supv. II
Chemistry Chem. Supv. IV
Bio. Chem./Support Chem. Supv. III
Water Quality
Env. Prog. Mgr. I
Planning Env. Supv. IV
Operations Env. Supv. IV
Env. Science Env. Supv. IV
Technical Support Env. Supv. IV

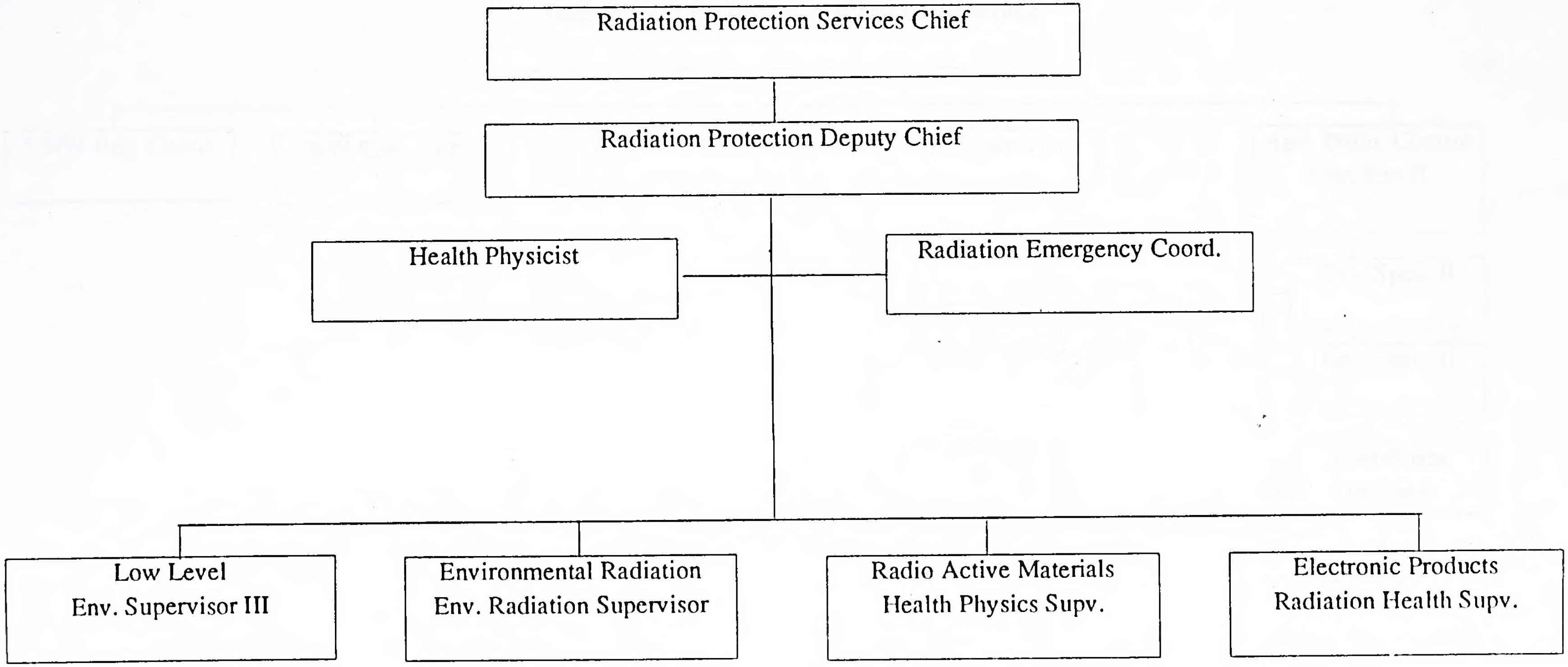
DIVISION OF FOREST RESOURCES



DIVISION OF LAND RESOURCES



DIVISION OF RADIATION PROTECTION



Radiation Protection Services Chief

Radiation Protection Deputy Chief

Health Physicist

Radiation Emergency Coord.

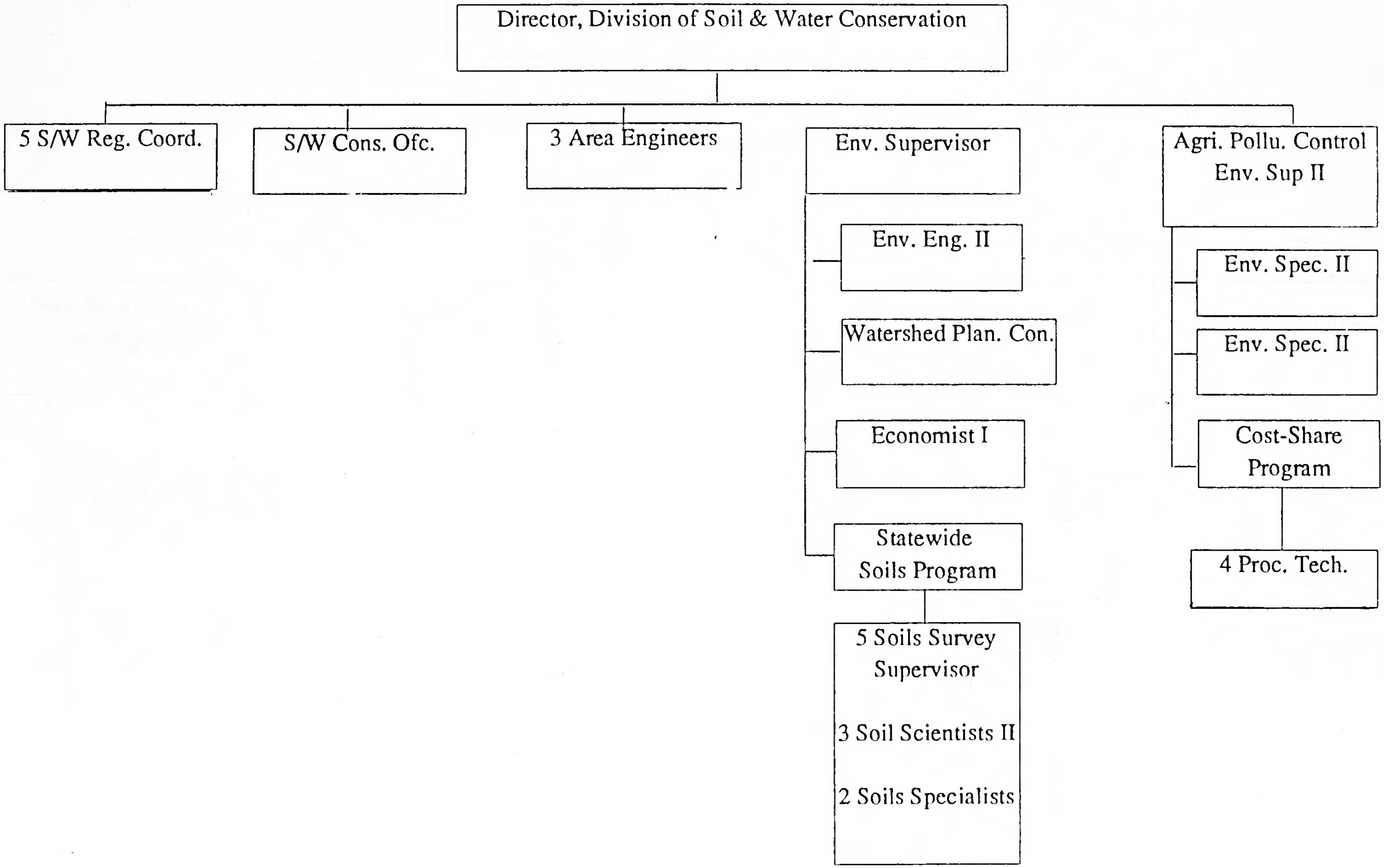
Low Level
Env. Supervisor III

Environmental Radiation
Env. Radiation Supervisor

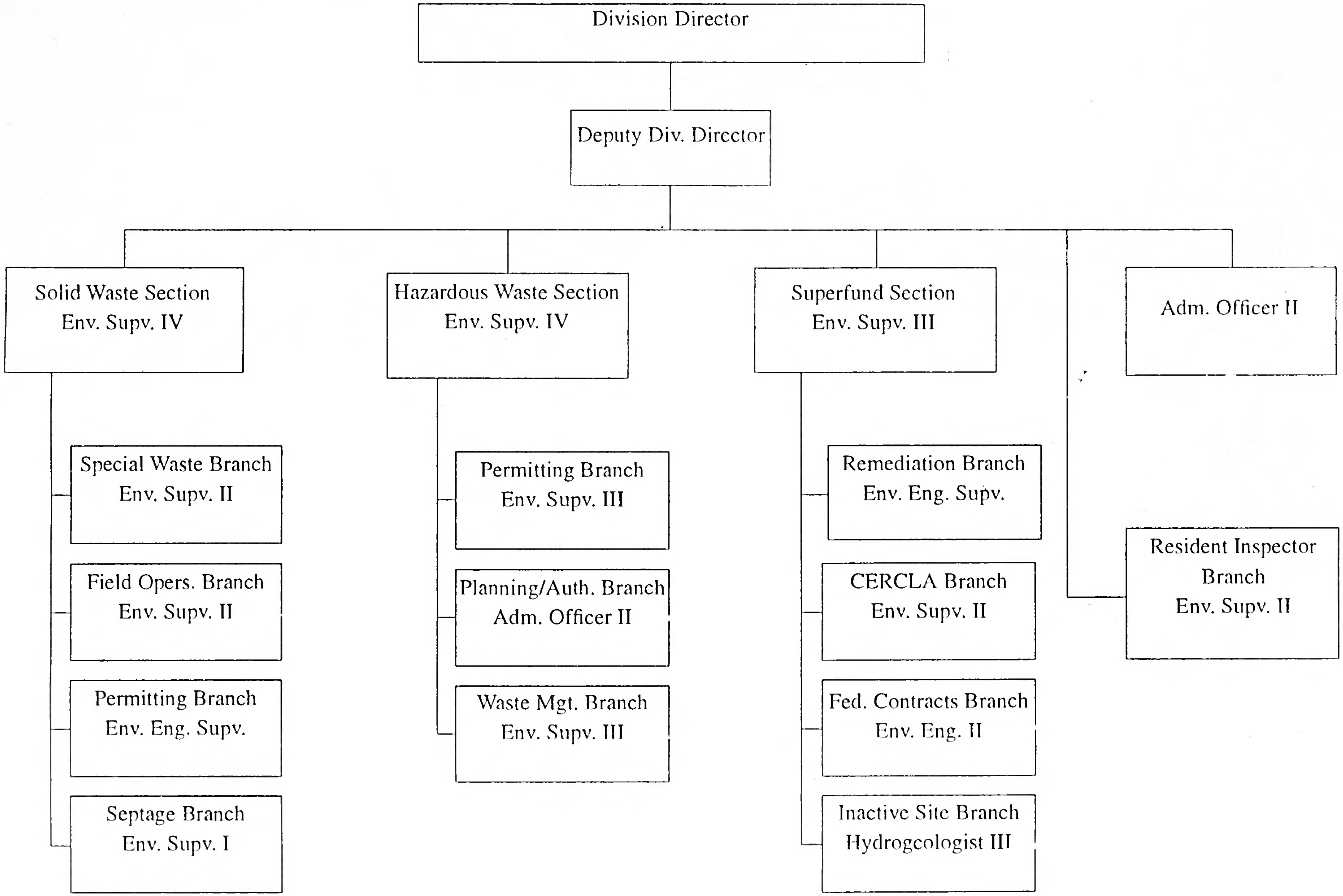
Radio Active Materials
Health Physics Supv.

Electronic Products
Radiation Health Supv.

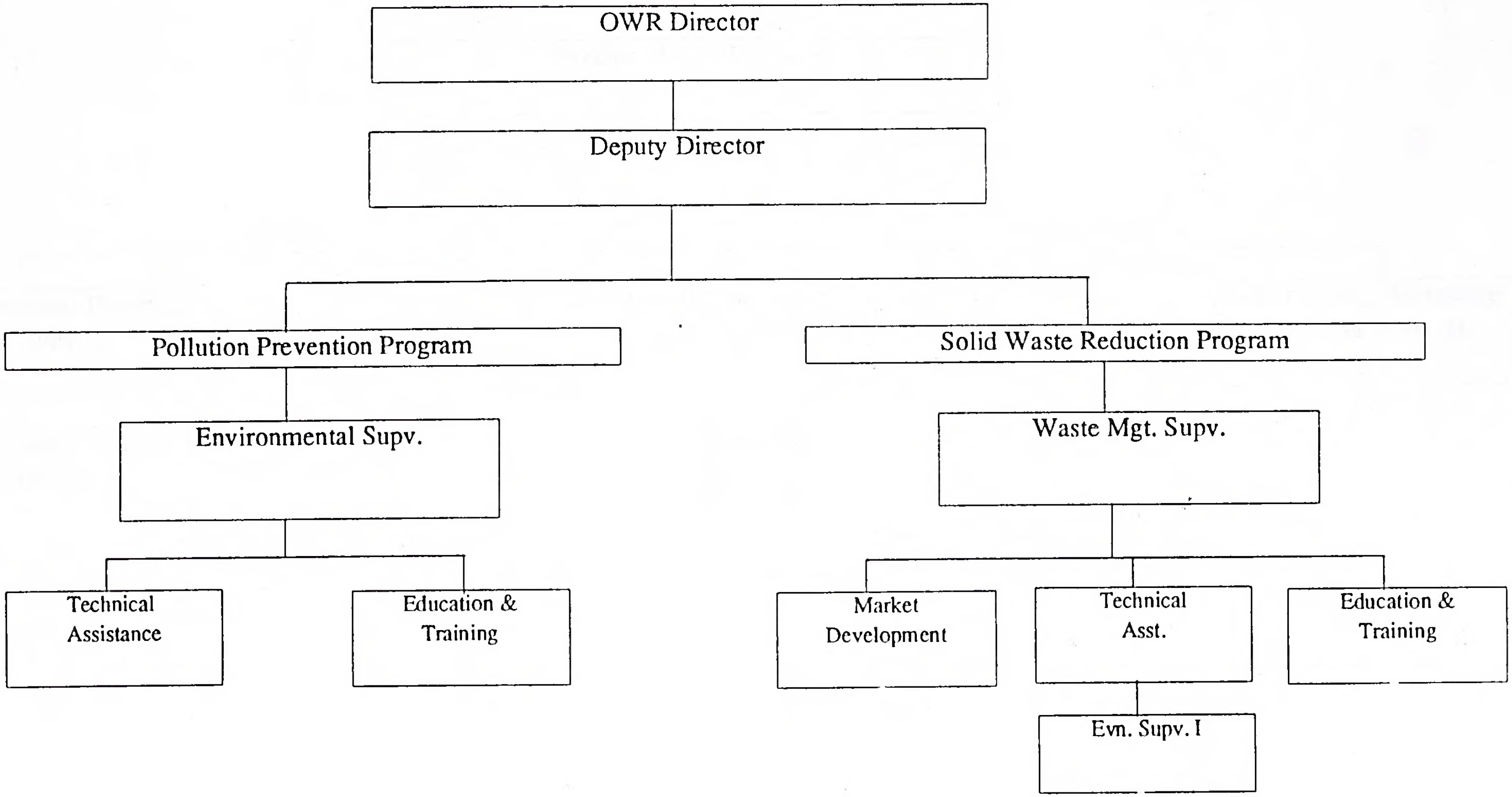
DIVISION OF SOIL & WATER CONSERVATION



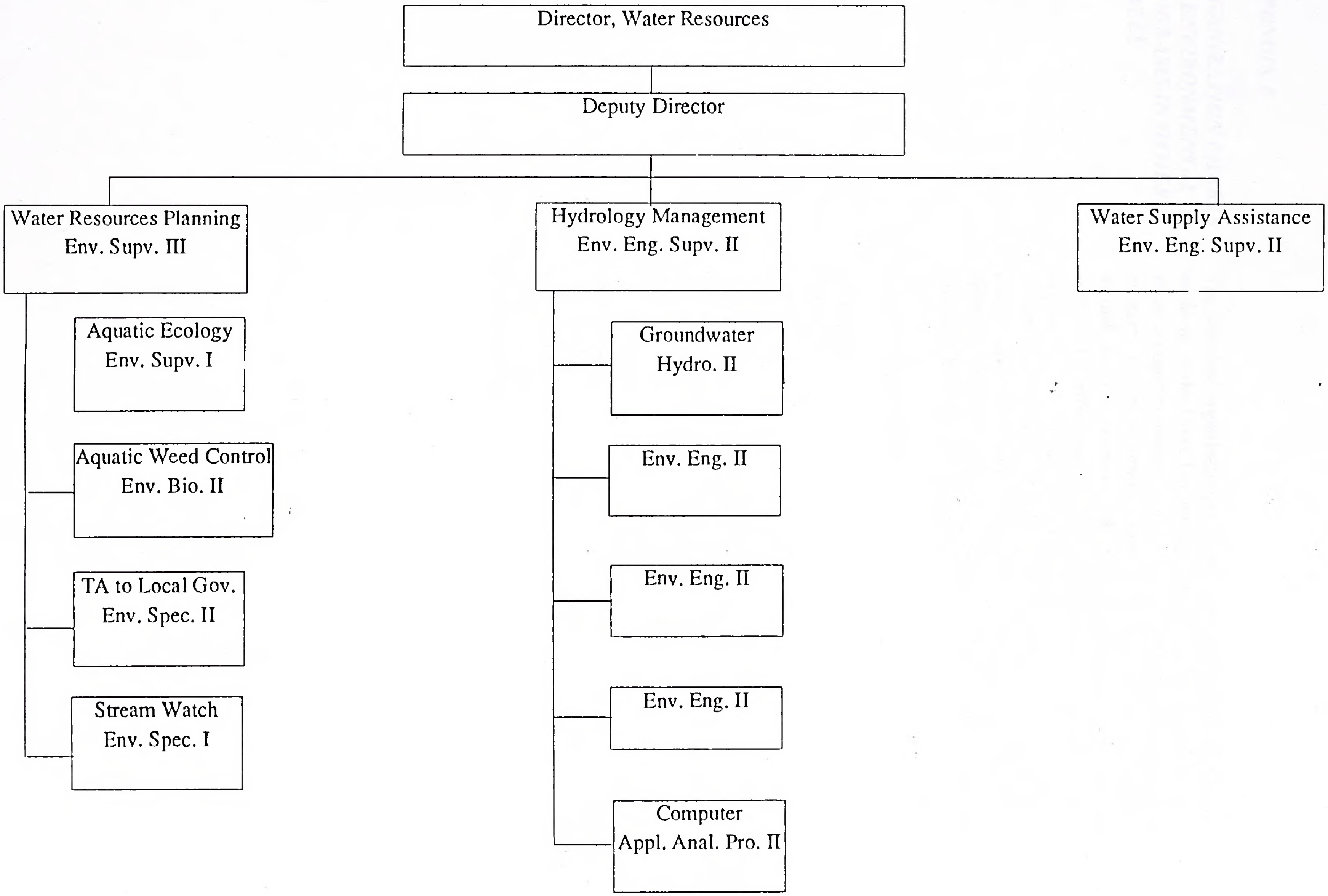
SOLID WASTE MANAGEMENT DIVISION



OFFICE OF WASTE REDUCTION



DIVISION OF WATER RESOURCES



APPENDIX E

ORGANIZATION CHARTS OF ENVIRONMENTAL PROGRAMS IN OTHER STATES

The attached organizational charts were obtained from graduate students at the Duke University School for Public Policy who were conducting research on environmental programs across the country. Given the limited time allowed the EPAT to complete its task, and the enormous effort required to conduct an in-depth study of the efficiency and effectiveness of each of these state's organizational structures, the team used the charts for informational purposes only. Any similarities between these charts and the team's suggested changes in DEHNR's organizational structure are purely coincidental. The charts are provided here for information.

Organizational charts included:

Alabama
California
Connecticut
Delaware
Georgia
Illinois
Kentucky
Maine
Massachusetts
New Hampshire
New York
Oklahoma
South Carolina
Washington

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

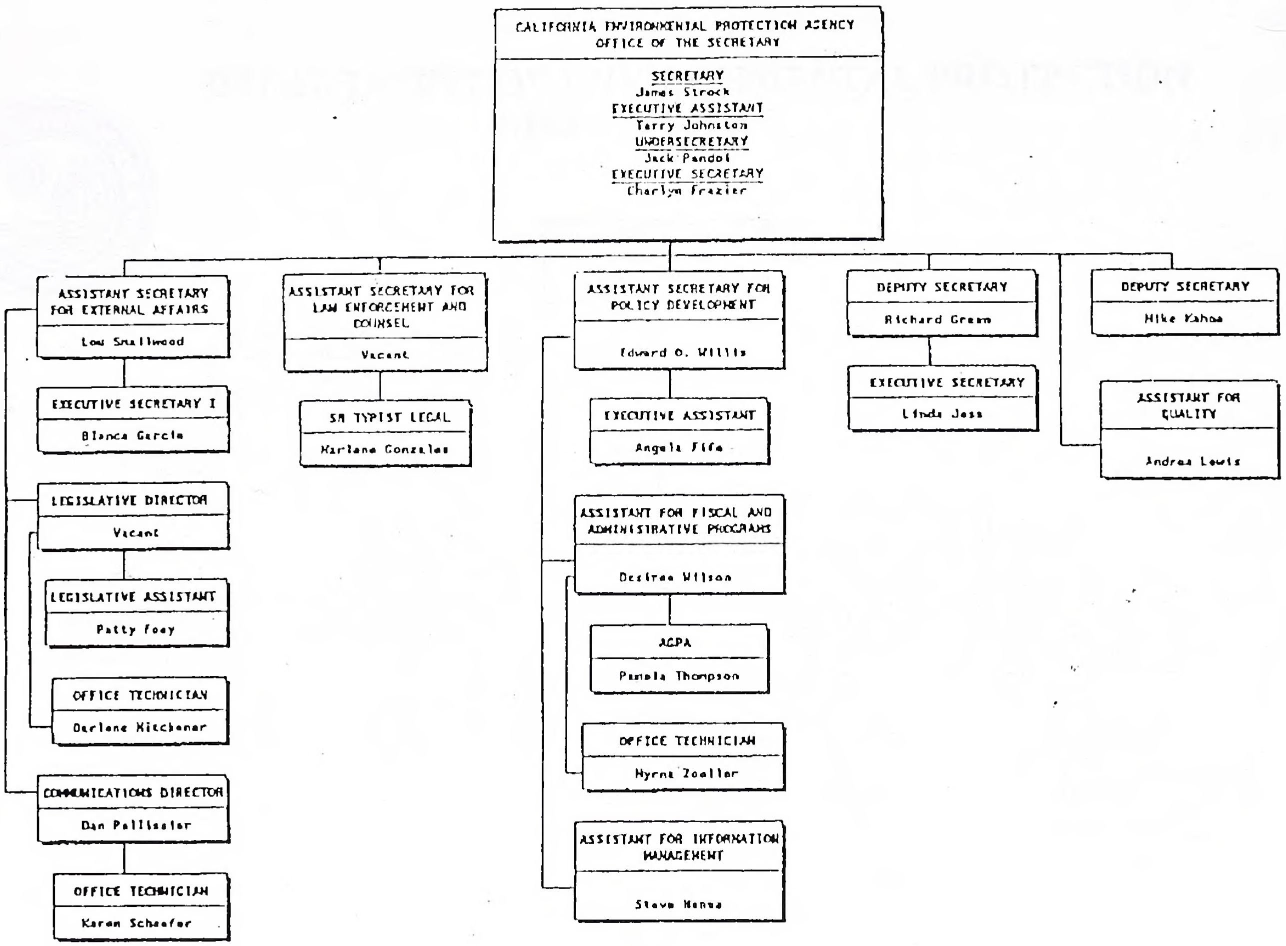
- OFFICE OF THE DIRECTOR
  - GENERAL COUNSEL
  - PUBLIC AFFAIRS
  - SPECIAL PROJECTS
  - AIR DIVISION
    - ENGINEERING SERVICES BRANCH
      - INDUSTRIAL SECTION
      - NON-INDUSTRIAL UNIT
    - PLANNING BRANCH
      - CONTROL STRATEGIES SECTION
      - SUPPORT UNIT
    - TECHNICAL SERVICES BRANCH
      - AMBIENT AIR UNIT
      - SOURCE SAMPLING UNIT
    - SPECIAL SERVICES SECTION
  - LAND DIVISION
    - ENGINEERING SERVICES BRANCH
    - RCRA COMPLIANCE BRANCH
      - NORTHERN UNIT
      - SOUTHERN UNIT
    - SOLID WASTE BRANCH
      - SOLID WASTE COMPLIANCE SEC.
        - SPECIAL WASTE UNIT
    - SPECIAL SERVICES UNIT
  - PERMITS & SERVICES DIVISION
    - INFORMATION SYSTEMS BRANCH
      - ENVIRONMENTAL DATA SECTION
      - PROGRAM DEVELOPMENT SECTION
    - FISCAL BRANCH
      - FUNDS UNIT
    - GENERAL SERVICES SECTION
    - PERSONNEL OFFICE
  - WATER DIVISION
    - WATER SUPPLY BRANCH
      - COMMUNITY SYSTEMS SECTION
      - NON-COMMUNITY SYSTEMS UNIT
    - MUNICIPAL BRANCH
      - PERMITS & COMPLIANCE SEC.
      - FACILITY CONSTRUCTION SEC.
    - INDUSTRIAL BRANCH
    - WATER QUALITY BRANCH
    - GROUNDWATER BRANCH
      - UST & UIC COMPLIANCE SEC.
      - UST CORRECTIVE ACTION UNIT
      - HYDROGEOLOGY UNIT
    - MINING & NONPOINT SOURCE SEC.
  - FIELD OPERATIONS DIVISION
    - MONTGOMERY BRANCH
      - COMPLIANCE SECTION
        - FACILITY UNIT
      - SPECIAL STUDIES SECTION
        - TOXICS UNIT
    - MOBILE BRANCH
      - COASTAL & AIR UNIT
      - WATER & LAND UNIT
      - LABORATORY UNIT
    - BIRMINGHAM BRANCH
      - FACILITY UNIT
      - LABORATORY UNIT
    - LABORATORY BRANCH
      - ORGANIC SECTION
      - INORGANIC SECTION
    - DECATUR SECTION

OFFICIAL: JANUARY 1, 1994

James W. Warr

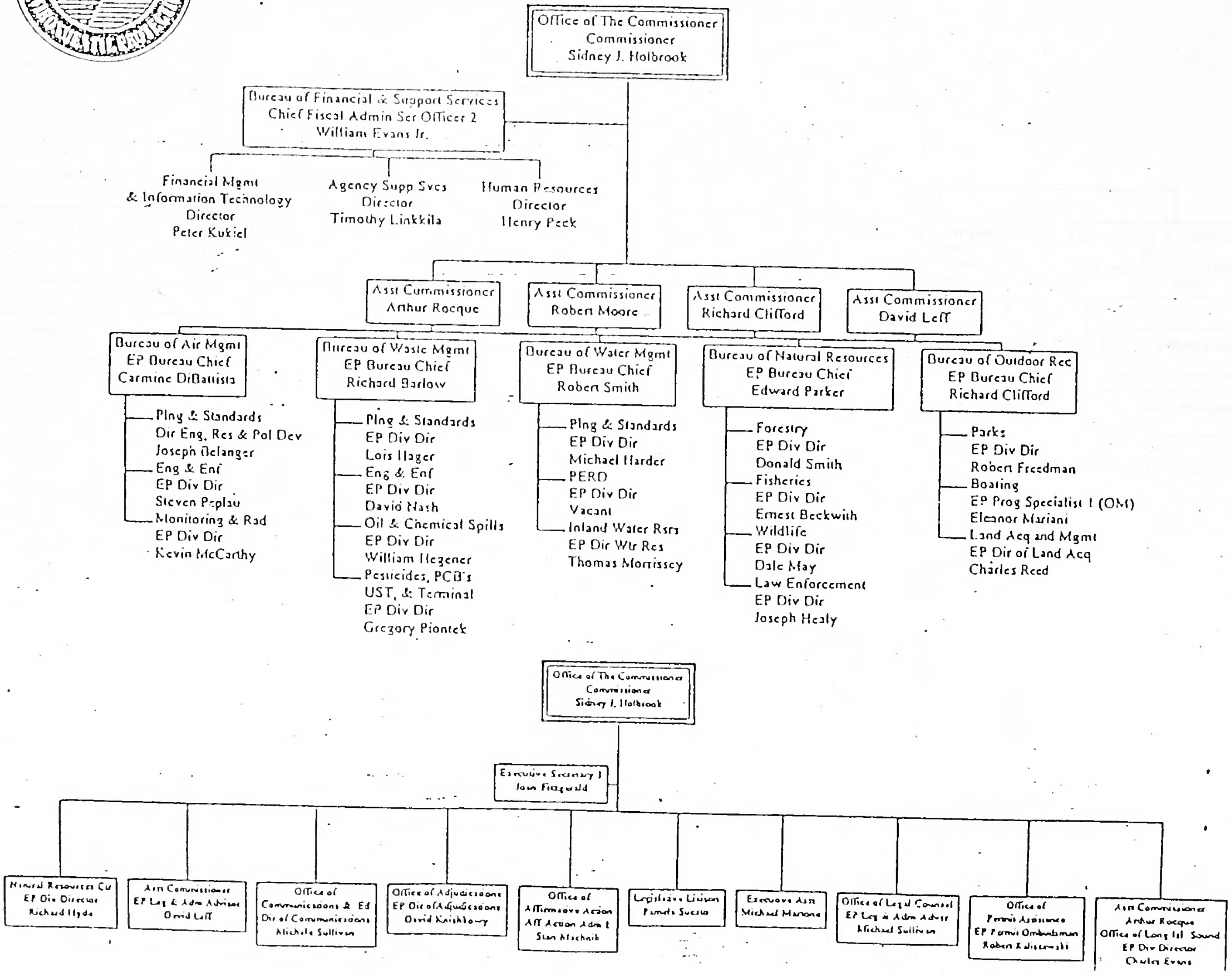
JAMES W. WARR, DIRECTOR

CALIFORNIA


CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF THE SECRETARY
SECRETARY
James Strock
EXECUTIVE ASSISTANT
Terry Johnston
UNDERSECRETARY
Jack Pandol
EXECUTIVE SECRETARY
Charlyn Frazier
ASSISTANT SECRETARY FOR EXTERNAL AFFAIRS
Lou Smallwood
EXECUTIVE SECRETARY I
Blanca Garcia
LEGISLATIVE DIRECTOR
Vacant
LEGISLATIVE ASSISTANT
Patty Foey
OFFICE TECHNICIAN
Darlene Kitchener
COMMUNICATIONS DIRECTOR
Dan Pellissier
OFFICE TECHNICIAN
Karen Schaefer
ASSISTANT SECRETARY FOR LAW ENFORCEMENT AND COUNSEL
Vacant
SR TYPIST LEGAL
Marlene Gonzales
ASSISTANT SECRETARY FOR POLICY DEVELOPMENT
Edward O. Willis
EXECUTIVE ASSISTANT
Angela Fife
ASSISTANT FOR FISCAL AND ADMINISTRATIVE PROGRAMS
Desiree Wilson
AGPA
Pamela Thompson
OFFICE TECHNICIAN
Myrna Zoeller
ASSISTANT FOR INFORMATION MANAGEMENT
Steve Hanna
DEPUTY SECRETARY
Richard Green
EXECUTIVE SECRETARY
Linda Jess
DEPUTY SECRETARY
Mike Kahoa
ASSISTANT FOR QUALITY
Andrea Lewis

CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION
MARCH 3, 1995



Office of The Commissioner
Commissioner
Sidney J. Holbrook

Bureau of Financial & Support Services
Chief Fiscal Admin Ser Officer 2
William Evans Jr.

- Financial Mgmt & Information Technology
  Director
  Peter Kukiel
- Agency Supp Svcs
  Director
  Timothy Linkkila
- Human Resources
  Director
  Henry Peck

Asst Commissioner
Arthur Rocque

Asst Commissioner
Robert Moore

Asst Commissioner
Richard Clifford

Asst Commissioner
David Leff

Bureau of Air Mgmt
EP Bureau Chief
Carmine DiBattista

- Plng & Standards
  Dir Eng, Res & Pol Dev
  Joseph Belanger
- Eng & Enf
  EP Div Dir
  Steven Peplau
- Monitoring & Rad
  EP Div Dir
  Kevin McCarthy

Bureau of Waste Mgmt
EP Bureau Chief
Richard Barlow

- Plng & Standards
  EP Div Dir
  Lois Hager
- Eng & Enf
  EP Div Dir
  David Nash
- Oil & Chemical Spills
  EP Div Dir
  William Hegener
- Pesticides, PCB's UST, & Terminal
  EP Div Dir
  Gregory Piontek

Bureau of Water Mgmt
EP Bureau Chief
Robert Smith

- Plng & Standards
  EP Div Dir
  Michael Harder
- PERD
  EP Div Dir
  Vacant
- Inland Water Rsrs
  EP Dir Wtr Res
  Thomas Morrissey

Bureau of Natural Resources
EP Bureau Chief
Edward Parker

- Forestry
  EP Div Dir
  Donald Smith
- Fisheries
  EP Div Dir
  Ernest Beckwith
- Wildlife
  EP Div Dir
  Dale May
- Law Enforcement
  EP Div Dir
  Joseph Healy

Bureau of Outdoor Rec
EP Bureau Chief
Richard Clifford

- Parks
  EP Div Dir
  Robert Freedman
- Boating
  EP Prog Specialist I (OM)
  Eleanor Mariani
- Land Acq and Mgmt
  EP Dir of Land Acq
  Charles Reed

Office of The Commissioner
Commissioner
Sidney J. Holbrook

Executive Secretary 1
Joan Fitzgerald

Natural Resources Co
EP Div Director
Richard Hyde

Asst Commissioner
EP Leg & Adm Advisor
David Leff

Office of
Communications & Ed
Dir of Communications
Michele Sullivan

Office of Adjudications
EP Dir of Adjudications
David Knishkowy

Office of
Affirmative Action
Aff Action Adm I
Stan Machnik

Legislative Liaison
Pamela Suesco

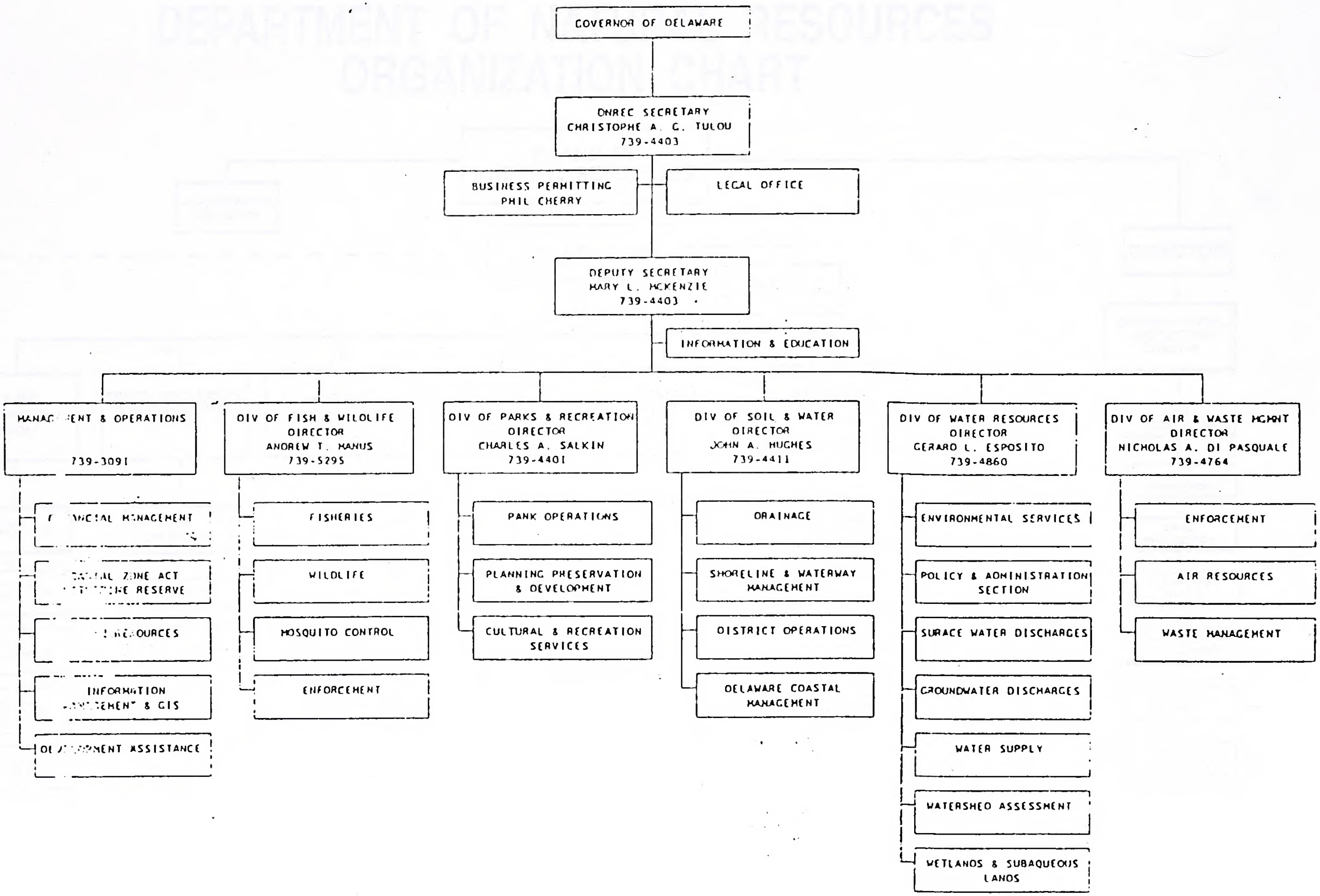
Executive Asst
Michael Marone

Office of Legal Counsel
EP Leg & Adm Advsr
Michael Sullivan

Office of
Permit Assistance
EP Permit Ombudsman
Robert Kaliszewski

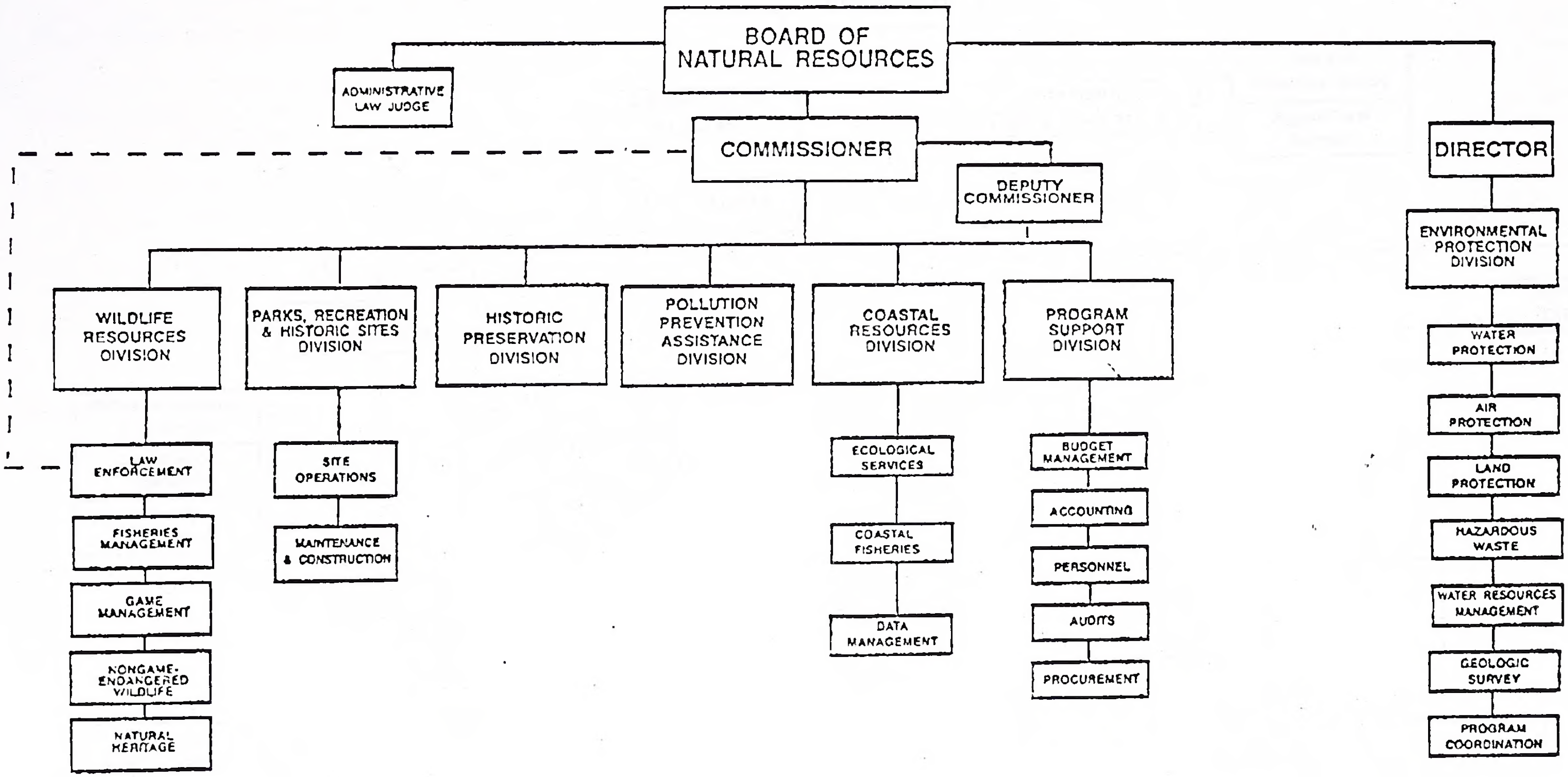
Asst Commissioner
Arthur Rocque
Office of Long Isl Sound
EP Div Director
Charles Evans

DELAWARE



1995.bJw

DEPARTMENT OF NATURAL RESOURCES ORGANIZATION CHART

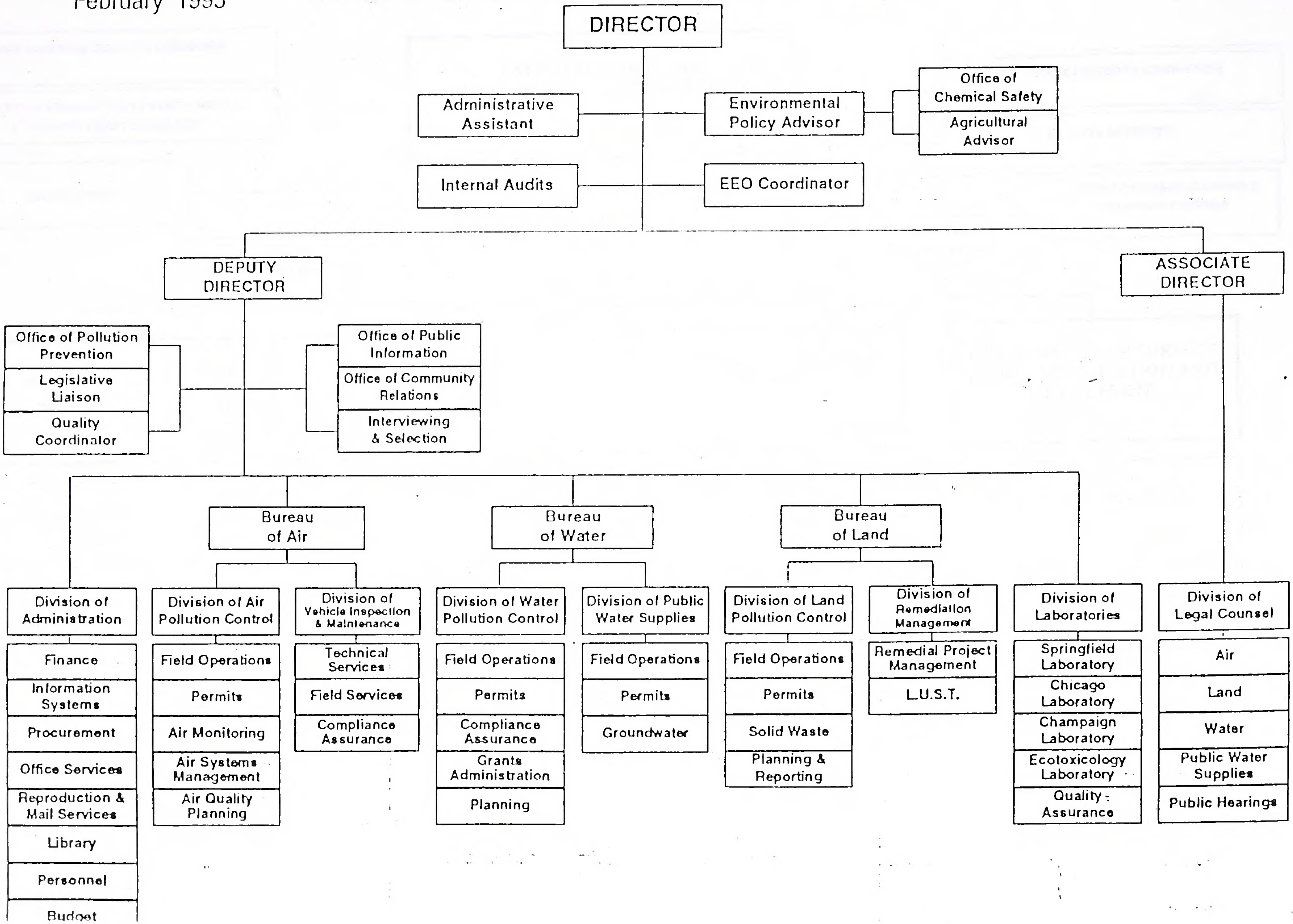


7/94

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
February 1995

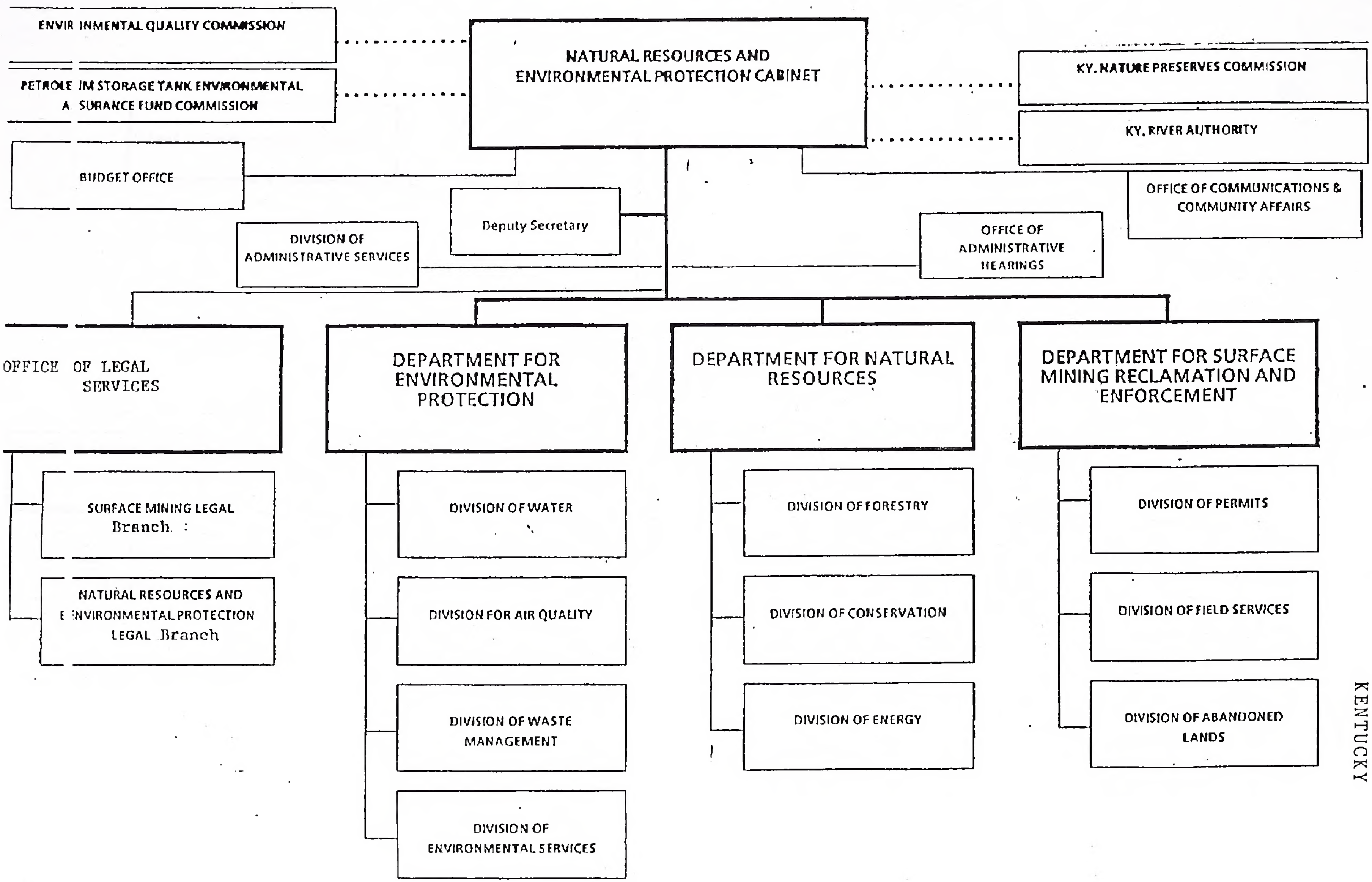
Organizational Chart

ILLINOIS



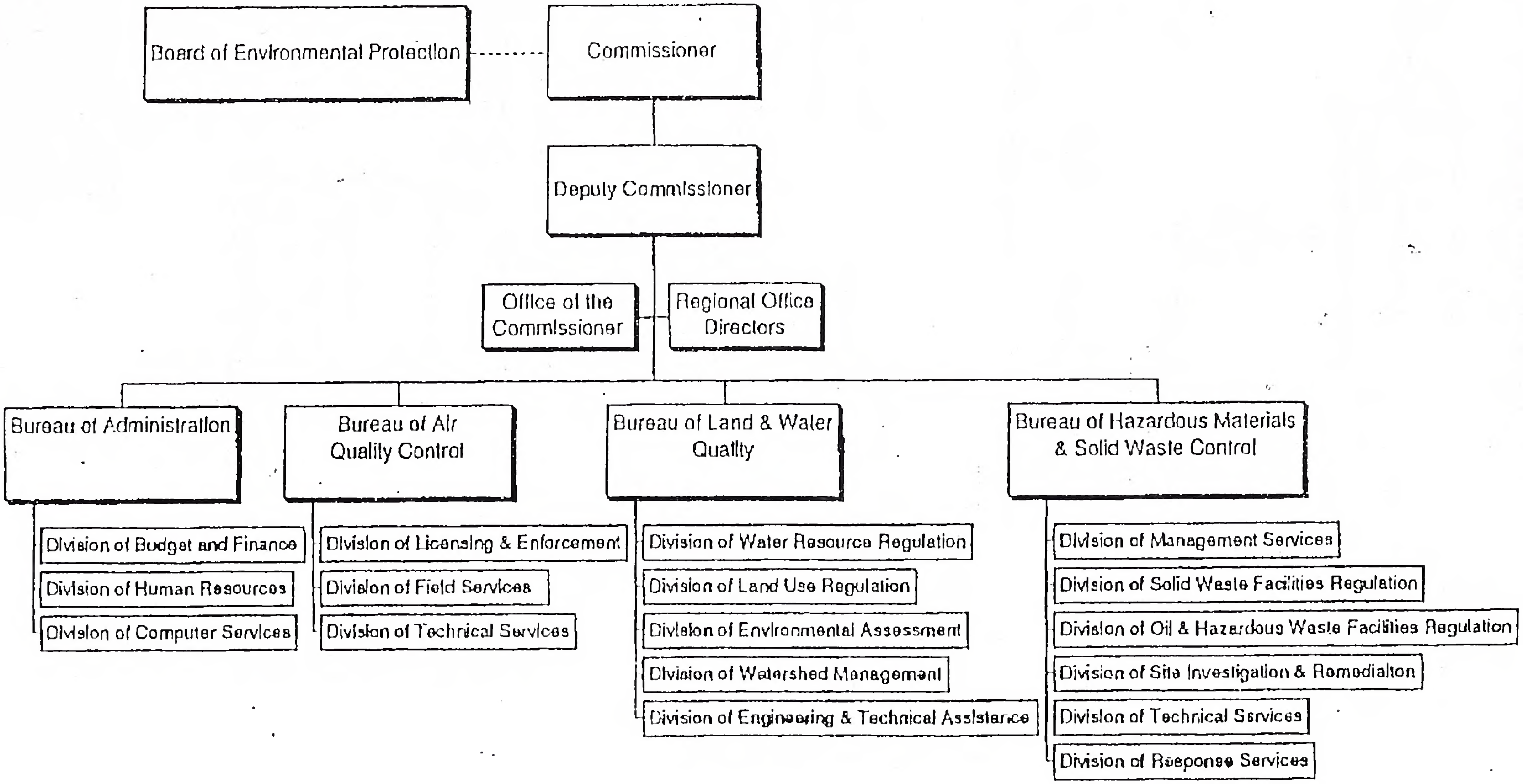
KENTUCKY

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET


ENVIRONMENTAL QUALITY COMMISSION
PETROLEUM STORAGE TANK ENVIRONMENTAL ASSURANCE FUND COMMISSION
BUDGET OFFICE
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
KY. NATURE PRESERVES COMMISSION
KY. RIVER AUTHORITY
OFFICE OF COMMUNICATIONS & COMMUNITY AFFAIRS
Deputy Secretary
DIVISION OF ADMINISTRATIVE SERVICES
OFFICE OF ADMINISTRATIVE HEARINGS
OFFICE OF LEGAL SERVICES
SURFACE MINING LEGAL Branch
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION LEGAL Branch
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
DIVISION FOR AIR QUALITY
DIVISION OF WASTE MANAGEMENT
DIVISION OF ENVIRONMENTAL SERVICES
DEPARTMENT FOR NATURAL RESOURCES
DIVISION OF FORESTRY
DIVISION OF CONSERVATION
DIVISION OF ENERGY
DEPARTMENT FOR SURFACE MINING RECLAMATION AND ENFORCEMENT
DIVISION OF PERMITS
DIVISION OF FIELD SERVICES
DIVISION OF ABANDONED LANDS

MAINE

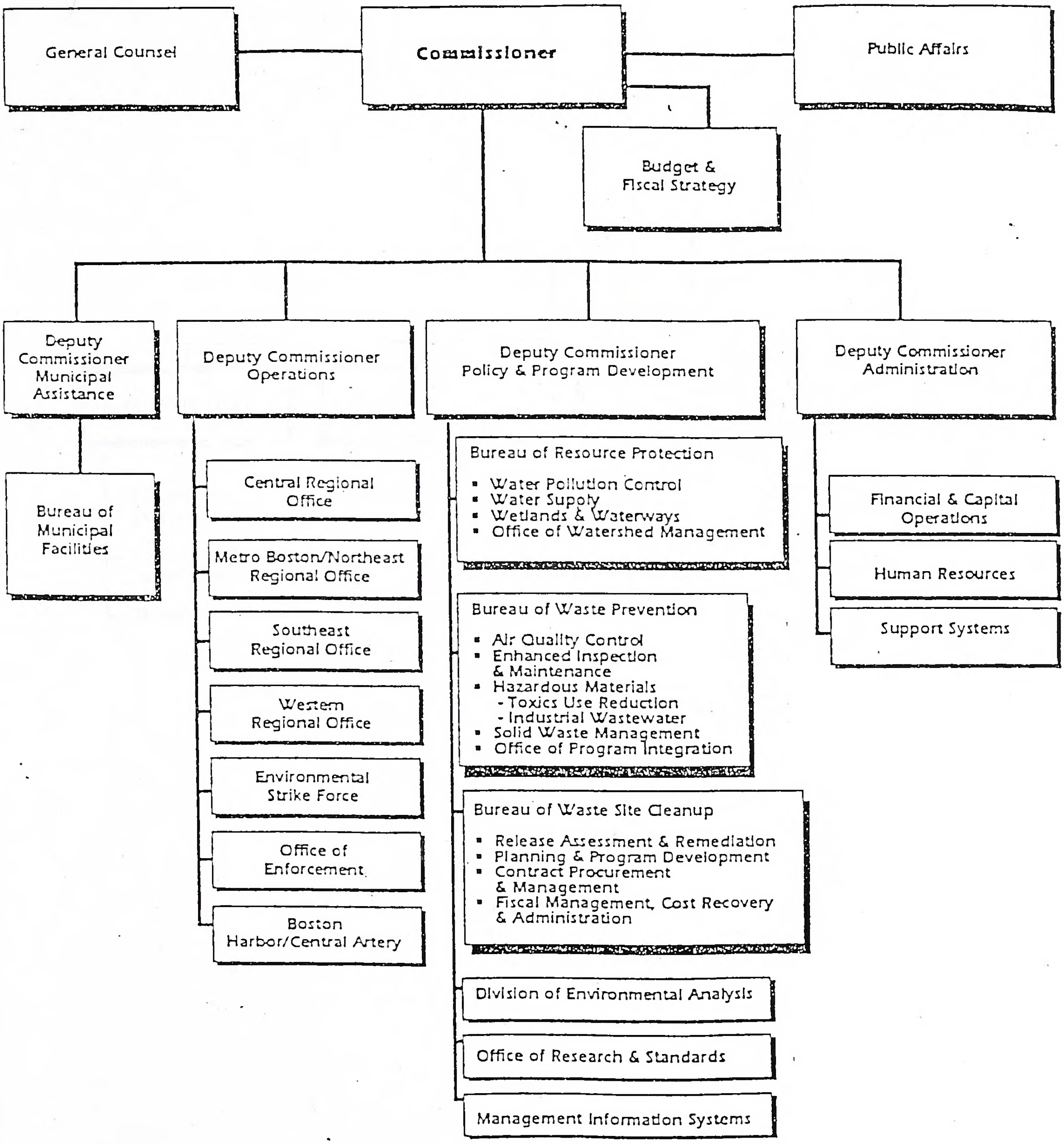
State of Maine
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Organizational Chart


Board of Environmental Protection
Commissioner
Deputy Commissioner
Office of the Commissioner
Regional Office Directors
Bureau of Administration
Division of Budget and Finance
Division of Human Resources
Division of Computer Services
Bureau of Air Quality Control
Division of Licensing & Enforcement
Division of Field Services
Division of Technical Services
Bureau of Land & Water Quality
Division of Water Resource Regulation
Division of Land Use Regulation
Division of Environmental Assessment
Division of Watershed Management
Division of Engineering & Technical Assistance
Bureau of Hazardous Materials & Solid Waste Control
Division of Management Services
Division of Solid Waste Facilities Regulation
Division of Oil & Hazardous Waste Facilities Regulation
Division of Site Investigation & Remediation
Division of Technical Services
Division of Response Services

September 1994

MASSACHUSETTS

Massachusetts Department of Environmental Protection
Organization Chart


General Counsel
Commissioner
Public Affairs
Budget & Fiscal Strategy
Deputy Commissioner Municipal Assistance
Deputy Commissioner Operations
Deputy Commissioner Policy & Program Development
Deputy Commissioner Administration
Bureau of Municipal Facilities
Central Regional Office
Metro Boston/Northeast Regional Office
Southeast Regional Office
Western Regional Office
Environmental Strike Force
Office of Enforcement
Boston Harbor/Central Artery
Bureau of Resource Protection
▪ Water Pollution Control
▪ Water Supply
▪ Wetlands & Waterways
▪ Office of Watershed Management
Bureau of Waste Prevention
▪ Air Quality Control
▪ Enhanced Inspection & Maintenance
▪ Hazardous Materials
- Toxics Use Reduction
- Industrial Wastewater
▪ Solid Waste Management
▪ Office of Program Integration
Bureau of Waste Site Cleanup
▪ Release Assessment & Remediation
▪ Planning & Program Development
▪ Contract Procurement & Management
▪ Fiscal Management, Cost Recovery & Administration
Division of Environmental Analysis
Office of Research & Standards
Management Information Systems
Financial & Capital Operations
Human Resources
Support Systems

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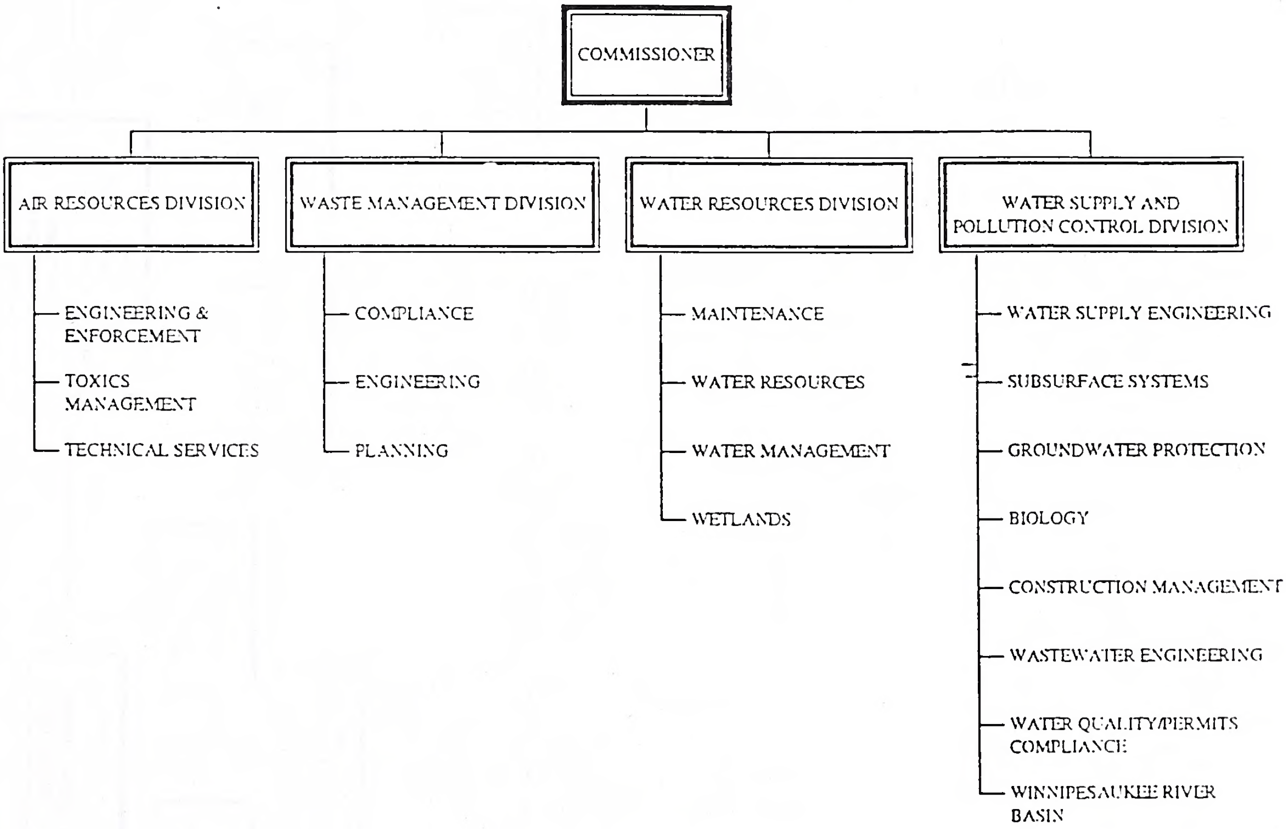
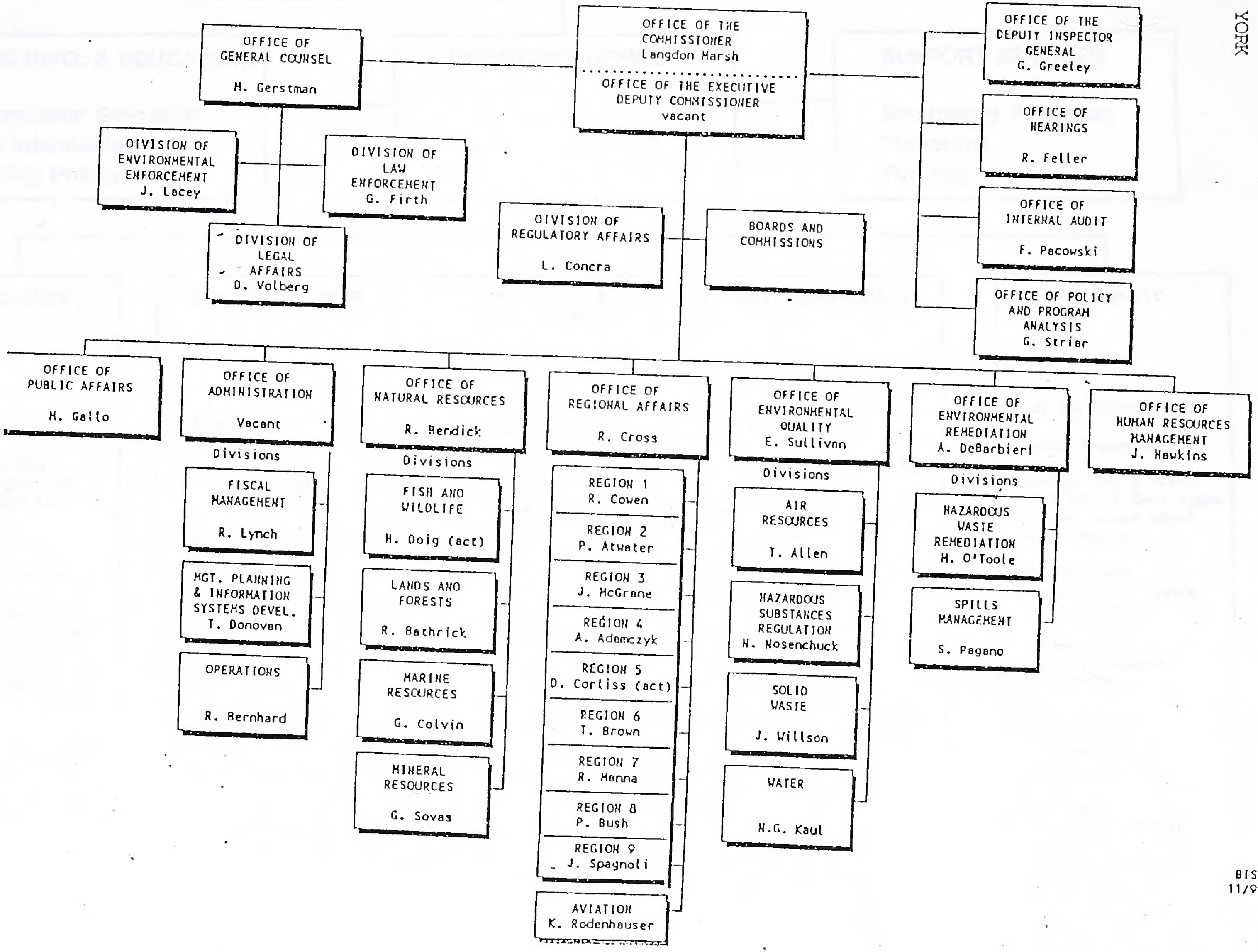
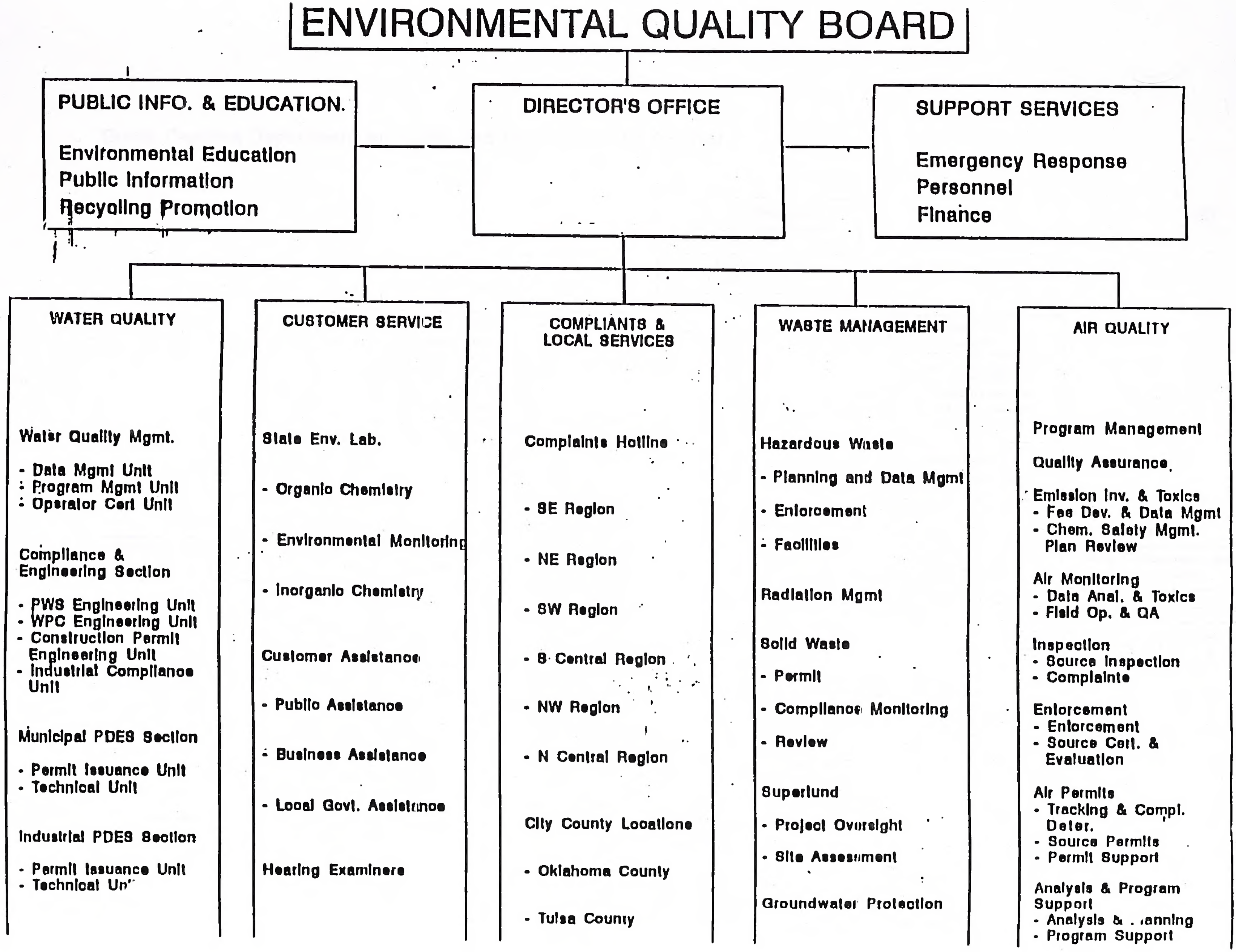
STATE OF NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
[603 271-3503]



NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION


OFFICE OF THE COMMISSIONER Langdon Marsh
OFFICE OF THE EXECUTIVE DEPUTY COMMISSIONER vacant
OFFICE OF GENERAL COUNSEL H. Gerstman
DIVISION OF ENVIRONMENTAL ENFORCEMENT J. Lacey
DIVISION OF LAW ENFORCEMENT G. Firth
DIVISION OF LEGAL AFFAIRS D. Volberg
DIVISION OF REGULATORY AFFAIRS L. Concra
BOARDS AND COMMISSIONS
OFFICE OF THE DEPUTY INSPECTOR GENERAL G. Greeley
OFFICE OF HEARINGS R. Feller
OFFICE OF INTERNAL AUDIT F. Pacowski
OFFICE OF POLICY AND PROGRAM ANALYSIS G. Striar
OFFICE OF PUBLIC AFFAIRS H. Gallo
OFFICE OF ADMINISTRATION Vacant
Divisions
FISCAL MANAGEMENT R. Lynch
MGT. PLANNING & INFORMATION SYSTEMS DEVEL. T. Donovan
OPERATIONS R. Bernhard
OFFICE OF NATURAL RESOURCES R. Berdick
Divisions
FISH AND WILDLIFE H. Doig (act)
LANDS AND FORESTS R. Bathrick
MARINE RESOURCES G. Colvin
MINERAL RESOURCES G. Sovas
OFFICE OF REGIONAL AFFAIRS R. Cross
REGION 1 R. Cowen
REGION 2 P. Atwater
REGION 3 J. McGrane
REGION 4 A. Adamczyk
REGION 5 D. Corliss (act)
REGION 6 T. Brown
REGION 7 R. Hanna
REGION 8 P. Bush
REGION 9 J. Spagnoli
AVIATION K. Rodenhauser
OFFICE OF ENVIRONMENTAL QUALITY E. Sullivan
Divisions
AIR RESOURCES T. Allen
HAZARDOUS SUBSTANCES REGULATION N. Nosenchuck
SOLID WASTE J. Willson
WATER N.G. Kaul
OFFICE OF ENVIRONMENTAL REMEDIATION A. DeBarbieri
Divisions
HAZARDOUS WASTE REMEDIATION M. O'Toole
SPILLS MANAGEMENT S. Pagano
OFFICE OF HUMAN RESOURCES MANAGEMENT J. Hawkins

BIS
11/94



ENVIRONMENTAL QUALITY BOARD

PUBLIC INFO. & EDUCATION.

Environmental Education
Public Information
Recycling Promotion

DIRECTOR'S OFFICE

SUPPORT SERVICES

Emergency Response
Personnel
Finance

WATER QUALITY

Water Quality Mgmt.
- Data Mgmt Unit
- Program Mgmt Unit
- Operator Cert Unit

Compliance & Engineering Section
- PWS Engineering Unit
- WPC Engineering Unit
- Construction Permit Engineering Unit
- Industrial Compliance Unit

Municipal PDES Section
- Permit Issuance Unit
- Technical Unit

Industrial PDES Section
- Permit Issuance Unit
- Technical Un

CUSTOMER SERVICE

State Env. Lab.
- Organic Chemistry
- Environmental Monitoring
- Inorganic Chemistry

Customer Assistance
- Public Assistance
- Business Assistance
- Local Govt. Assistance

Hearing Examiners

COMPLIANTS & LOCAL SERVICES

Complaints Hotline
- SE Region
- NE Region
- SW Region
- S Central Region
- NW Region
- N Central Region

City County Locations
- Oklahoma County
- Tulsa County

WASTE MANAGEMENT

Hazardous Waste
- Planning and Data Mgmt
- Enforcement
- Facilities

Radiation Mgmt

Solid Waste
- Permit
- Compliance Monitoring
- Review

Superfund
- Project Oversight
- Site Assessment

Groundwater Protection

AIR QUALITY

Program Management

Quality Assurance

Emission Inv. & Toxics
- Fee Dev. & Data Mgmt
- Chem. Safety Mgmt. Plan Review

Air Monitoring
- Data Anal. & Toxics
- Field Op. & QA

Inspection
- Source Inspection
- Complaints

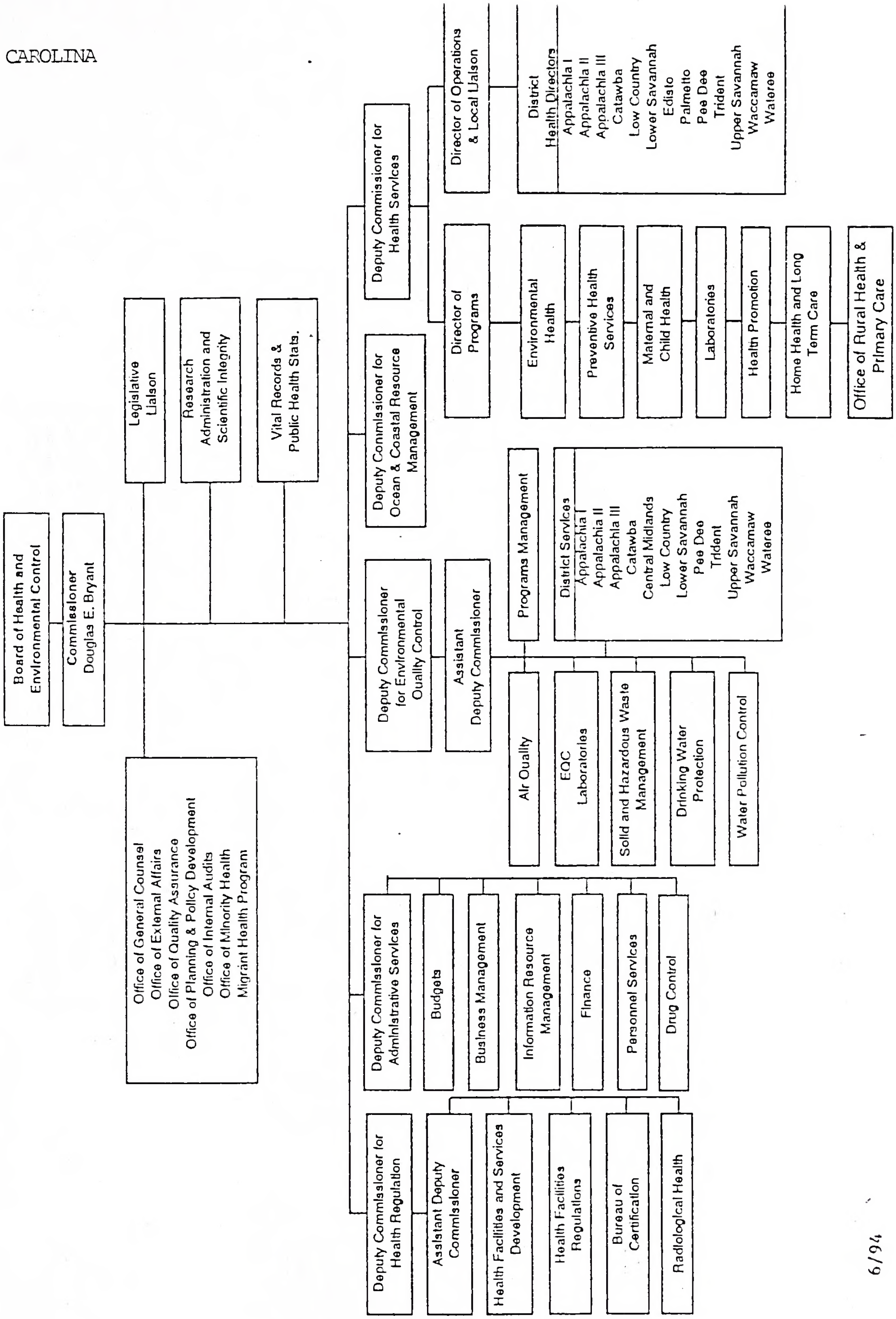
Enforcement
- Enforcement
- Source Cert. & Evaluation

Air Permits
- Tracking & Compl. Deter.
- Source Permits
- Permit Support

Analysis & Program Support
- Analysis & Planning
- Program Support

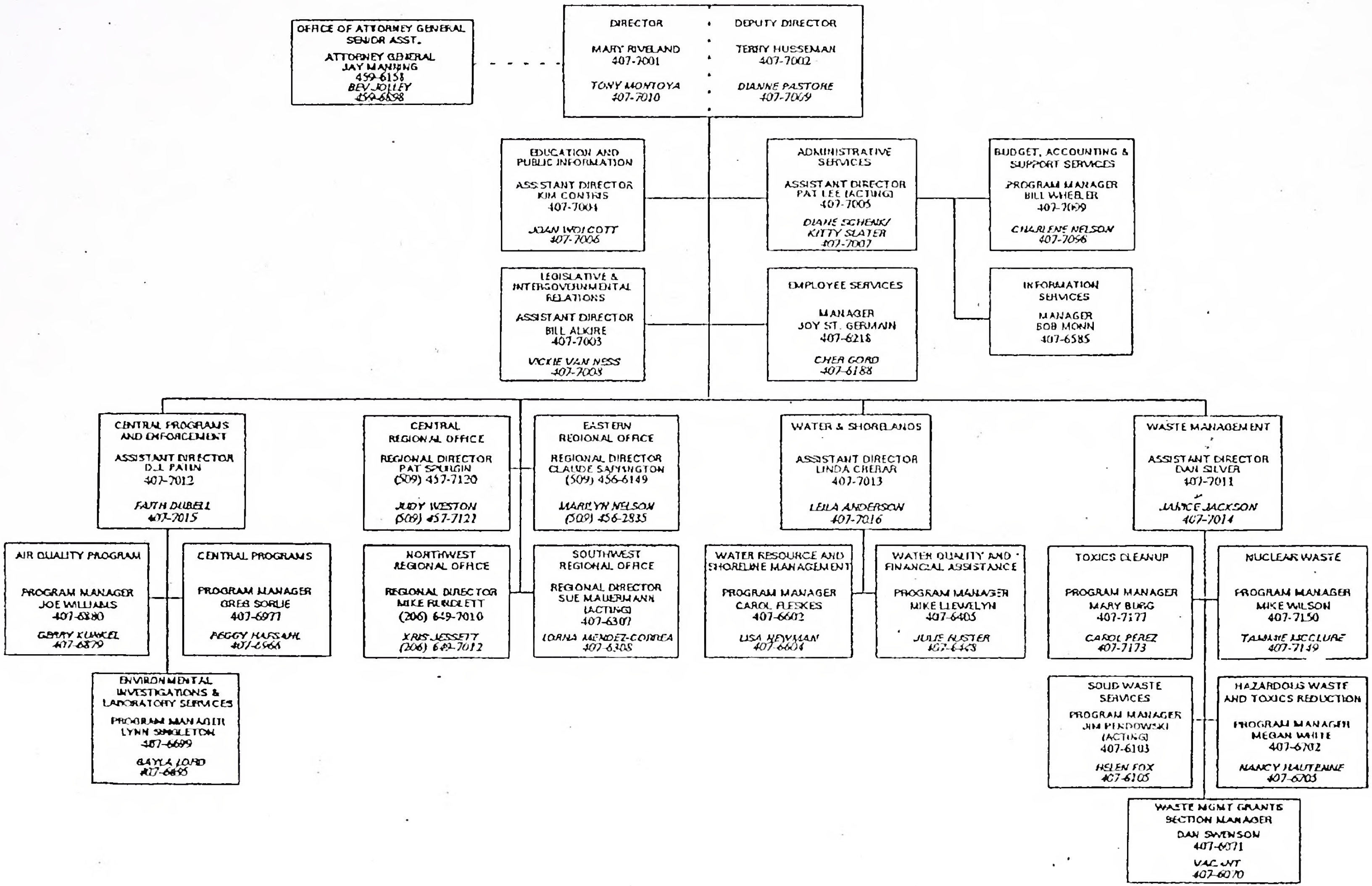
SOUTH CAROLINA

South Carolina Department of Health and Environmental Control


Board of Health and Environmental Control
Commissioner Douglas E. Bryant
Legislative Liaison
Research Administration and Scientific Integrity
Vital Records & Public Health Stats.
Office of General Counsel
Office of External Affairs
Office of Quality Assurance
Office of Planning & Policy Development
Office of Internal Audits
Office of Minority Health
Migrant Health Program
Deputy Commissioner for Health Services
Director of Operations & Local Liaison
District Health Directors
Appalachia I
Appalachia II
Appalachia III
Catawba
Low Country
Lower Savannah
Edisto
Palmetto
Pee Dee
Trident
Upper Savannah
Waccamaw
Wateree
Director of Programs
Environmental Health
Preventive Health Services
Maternal and Child Health
Laboratories
Health Promotion
Home Health and Long Term Care
Office of Rural Health & Primary Care
Deputy Commissioner for Ocean & Coastal Resource Management
Deputy Commissioner for Environmental Quality Control
Assistant Deputy Commissioner
Programs Management
District Services
Appalachia I
Appalachia II
Appalachia III
Catawba
Central Midlands
Low Country
Lower Savannah
Pee Dee
Trident
Upper Savannah
Waccamaw
Wateree
Air Quality
EQC Laboratories
Solid and Hazardous Waste Management
Drinking Water Protection
Water Pollution Control
Deputy Commissioner for Administrative Services
Budgets
Business Management
Information Resource Management
Finance
Personnel Services
Drug Control
Deputy Commissioner for Health Regulation
Assistant Deputy Commissioner
Health Facilities and Services Development
Health Facilities Regulations
Bureau of Certification
Radiological Health
6/94

WASHINGTON STATE DEPARTMENT OF ECOLOGY

FEBRUARY 1995



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Jonathan B. Howes
Secretary

James B. Hunt, Jr.
Governor

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